JUNE, 1932

COTTON

Serving the

TEXTILE INDUSTRIES

14 YEAR OLD—

THIS photograph was made December 10, 1931, while the belt was running. Note its true and even performance, after 14 years of steady service driving the heavy loom pictured with it.

More than 29 years ago, Manhattan engineers originated and perfected the basic design of Condor Belts.

They were the *first* high-grade Red Friction Surface transmission belts.

Condor Belts today are used in over 400 textile mills and throughout industry in general—because they give reliable performance over long periods and, in the end produce "great economy" for the user.

Condor Belts are supplied in all widths and plies.

Sold by leading jobbers everywhere

THE MANHATTAN RUBBER MFG. DIVISION
Of Raybestos-Manhattan, Inc.
Executive Offices and Factories, Passaic, New Jersey

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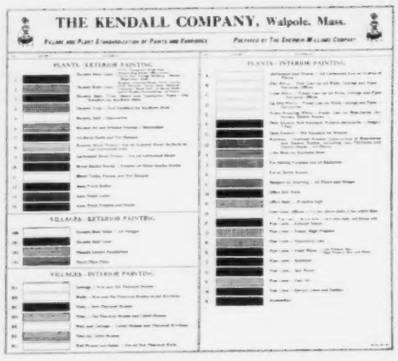
S-W Standardization Plan *provides more than surface protection..*

What the S-W PAINT Standardization Plan is:


THE KENDALL COMPANY, Walpole, Mass.

It eliminates guesswork in the painting of mill property. Individual charts (like one shown above) are worked out by S-W Paint Engineers for each customer. This chart shows **WHAT** finish to use . . . **WHERE** . . **HOW** . . . and **WHEN** to use it. Copies of the chart are kept at all operating units of the plant—others in the files of the sales and technical departments of Sherwin-Williams Co. Each individual product has a code number—or letter—which indicates to **plant executives** and to Sherwin-Williams, the **purpose**, the **color** and the **product** for each surface and condition. This assures mill management of receiving the same uniform grade of product as was first recommended—thus making repairing and refinishing the same in appearance as the original finish.

TODAY, paint must be considered as *more* than just something that protects surfaces! Paint must be selected in relation to how it may *increase the utility* of the surface it protects, as well as how manufacturing processes and other conditions may react to it.

Right there is where the Sherwin-Williams Standardization Plan enters the industrial picture! This plan provides a *controlled* system of selecting and applying finishes that best meet the exact requirements of each surface.

Proper paint on walls and ceilings in the plant can *increase working light 30% to 50%*—increase production, reduce accidents and spoilage, improve health and morale. It will also resist fumes, excessive moisture, keep premises sanitary.

The S-W Paint Standardization Plan has saved thousands of dollars for many of the leaders of the textile industry. Let an S-W Paint Engineer discuss your paint investment with you. Write for the interesting booklet that completely describes this plan. The Sherwin-Williams Co., Dept. 729, Cleveland, Ohio.

NOTE: Textile offices at Philadelphia, Charlotte, Spartanburg, and Atlanta. Our warehouses at Charlotte and Spartanburg carry stock for prompt service and convenience of the textile trades.

Section of the Card Room at Mollohon Mills (Kendall Co.). Note how the daylight entering the window at the side of the room is carried clear through to the center and is softly diffused by the action of S-W Save-Lite on the ceiling.

SHERWIN-WILLIAMS MILL VILLAGE PAINTS

These standard finishes meet every requirement of Mill Village property. The photograph here shows a section of the village of the Gaffney Manufacturing Co., Gaffney, S. C. The village property of the Gaffney Co. is kept up with S-W Mill Village Paints.

SHERWIN-WILLIAMS SAVE-LITE

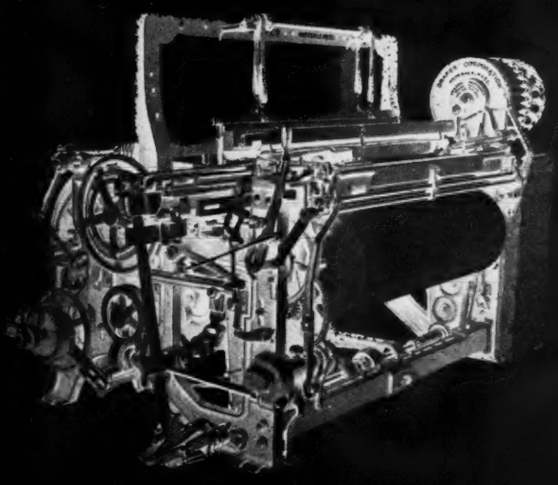
COTTON is published monthly by W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga. Subscription rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign countries, $2.00 per year. Entered second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879

A Loom That is Different

Our New X Model High Speed Northrop Loom

A NEW LIGHT ON WEAVING

It Was NOT Built by Adding Something Better to What Was



It WAS Built New from the Ground up A Triumph of Modern Loom Engineers

Why It Is Different

It Runs Faster—Which Means at least 20 Per Cent More Cloth

It Runs Better—Like the latest auto it is the Product of Modern Engineering—It is Built to meet Today's Weaving Problems

It Stops and Starts with a Precision that Makes the Weaver's Work Easy

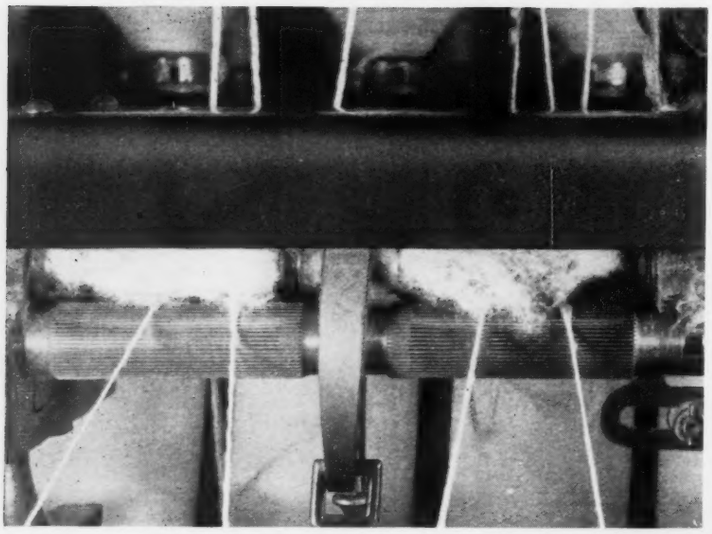
Requires Less Attention from the Fixer—It has parts that Wear Longer

There is Nothing Like It—Nothing Else That Will Save So Much Money in the Weave Room

DRAPER CORPORATION

Hopedale Massachusetts

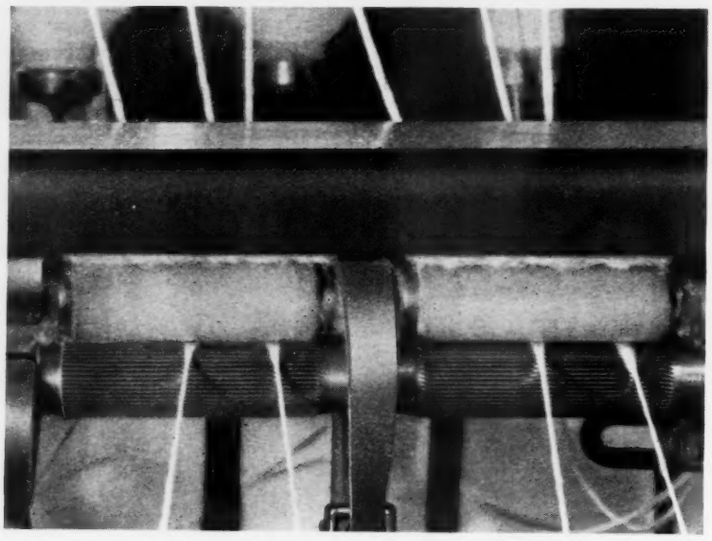
Southern Offices Atlanta Ga and Spartanburg S C



EYEBROWS?

SEAMLESS CORK COTS *(below) after running exactly the same length of time as the ordinary rolls at the left, show practically no eyebrows. The waste is back on the clearer board where it belongs.*

ORDINARY ROLLS *(above) produce eyebrows and allow waste to fall into the work, thus causing bunches, uneven yarn, and excessive end breakage.*



NOT WITH CORK ROLLS

Evener yarn and less end breakage with these money-saving Seamless Cork Cots

HERE'S the solution to the troublesome and costly "eyebrow" problem. Mill men will tell you "Armstrong's Seamless Cork Cots have done away with eyebrows."

The two photographs—one showing ordinary rolls and the other, cork rolls—clearly illustrate this point. These rolls on the same frame were allowed to run the same length of time after the boards were cleaned.

The high coefficient of friction of Armstrong's Seamless Cork Cots places the clearer waste on the clearer board where it belongs. Waste won't drop into the work. Production is increased by preventing excessive end breakage. The quality of the work is improved by reducing the number of slubs or bunches.

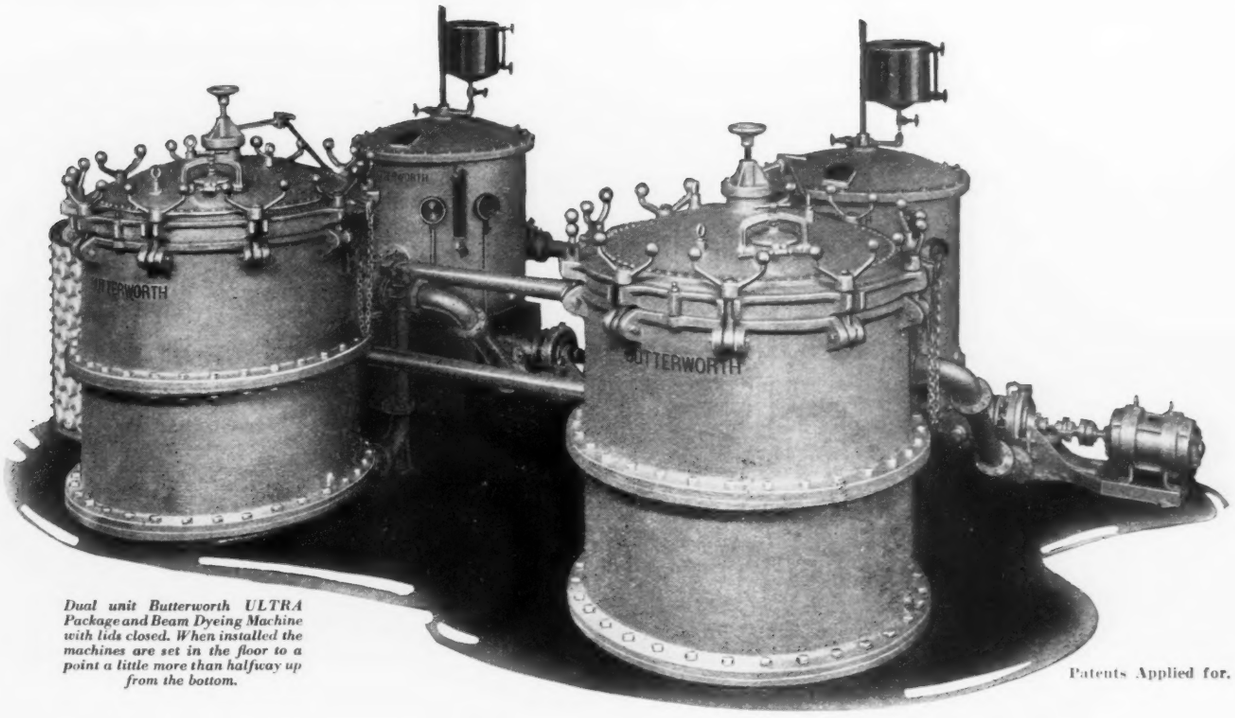
Mills using Armstrong's Seamless Cork Cots today (and there are more than a hundred) have reduced their roll covering costs an average of more than 60%. Today more than 5,000,000 spindles in mills spinning from 2s to 120s are equipped with Armstrong's Seamless Cork Cots—the modern money-saving roll covering material. Is your mill among them?

Send for the new free book "The Facts About Armstrong's Seamless Cork Cots," giving cost studies based on actual mill records. Address Armstrong Cork Company, 923 Arch Street, Lancaster, Pennsylvania.

Armstrong's (A) Product

Armstrong's SEAMLESS *Cork Cots*

For Spinning and Card Room Rolls

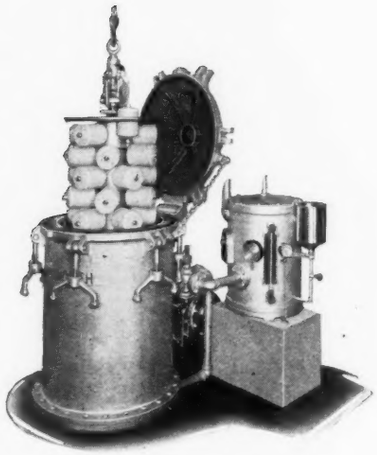


Dual unit Butterworth ULTRA Package and Beam Dyeing Machine with lids closed. When installed the machines are set in the floor to a point a little more than halfway up from the bottom.

Patents Applied for.

You entirely eliminate danger of uneven dyeing with the · · ·

BUTTERWORTH *ULTRA* PACKAGE AND BEAM DYEING MACHINE · · ·



Fifty pound Butterworth ULTRA Package Dyeing Machine. One-pound sample dyeing machine of similar construction can be furnished for laboratory purposes.

THE *ULTRA* machine has aroused more genuine interest than any new machine that we have announced during the past five years. So great has been this interest that we have made arrangements for demonstrating the new machine in actual operation.

The *ULTRA* machine is made in various sizes adapted for the dyeing of 25, 50, 100, 200, 300, 500, 600, 800 and 1600 pounds of yarn on tubes. The 100, 500 and 800 pound machines can also be used for the dyeing of warp yarns on a section beam in lots from 100 to 2000 pounds per dye batch.

By all means you should investigate the possibilities of this new *ULTRA* machine which gives greater, quicker penetration and a more even flow of dye liquor.

Descriptive literature will be mailed promptly and arrangements for witnessing the machine in actual operation can be made by appointment.

H. W. BUTTERWORTH & SONS COMPANY, *Established 1820*
PHILADELPHIA, PA.
PLANTS *at* PHILADELPHIA *and* BETHAYRES, PA.

New England Office:
TURKS HEAD BUILDING
Providence, R. I.

Southern Office:
JOHNSTON BUILDING
Charlotte, N. C.

In Canada:
W. J. WESTAWAY CO.
Hamilton, Ontario

BUTTERWORTH *Finishing* MACHINERY

A COMPLETE LINE OF RAYON AND FINISHING MACHINERY FOR THE TEXTILE INDUSTRY

YOU CAN BANK ON TUFFER

Not on first costs, perhaps, but in its superior results you can bank on Tuffer Card Clothing. As a quality product Tuffer gives unusually long life and service—resulting in many more pounds of production and less waste in stock.

Tuffer Card Clothing takes grinding easily and perfectly, holds point longer, is easier to strip and affords closer setting without injury to the point. This means much more even carding.

You will find the Howard Organization ready at all times to help you get better results and economical operation. Let our representatives show you the true meaning of prompt, personal service . . . . and a fair deal on all card clothing problems.

Tuffer Card Clothing is guaranteed against shelling out.

HOWARD PRODUCTS

CARD CLOTHING
NAPPER CLOTHING
WIRE HEDDLES
CYLINDER FILLETS
DOFFER FILLETS
HAND STRIPPING CARDS
BURNISHER FILLETS
EMERY FILLETS
STRICKLES
TOP FLATS RECOVERED

HOWARD BROS. MFG. COMPANY

Home Office and Factory: WORCESTER, MASS.

Southern Plant
244 FORSYTH ST., ATLANTA, GA.

Branch Offices
PHILADELPHIA, DALLAS and WASHINGTON, D. C.

TRADE MARK TUFFER REG. U.S. PAT. OFF.

CARD CLOTHING

Make your own Prosperity!

Business is never so bad but that some companies make a profit . . never so good but that there are occasional failures and receiverships.

▼

"Prosperity" for you can be reduced down to selling your product for more than it costs to make it. You can't always control selling prices. You CAN usually do things about costs.

▼

Take this book for example . . "The ABC of Long Draft Spinning." It points out one method of cost reduction. Long Draft Spinning means less labor, less machinery investment. It sometimes permits the use of shorter staple. Study it and learn one way to hasten your own prosperity. If you haven't a copy, we'll gladly send you one.

WHITIN
MACHINE WORKS

ESTABLISHED 1831

Fales & Jenks Division
Woonsocket Machine and Press Division

Whitinsville, Massachusetts, U. S. A.

Charlotte, N. C. Atlanta, Ga.

WHITIN MACHINE WORKS
Whitinsville, Mass.

Send me a copy of "The ABC of Long Draft Spinning."

Name .....

Mill .....

City ..... State .....

EFFICIENCY

Means Getting The Most Done With The Least Effort

Moving picker laps by hand from a breaker to an intermediate, and from the intermediate to the finisher is a fine example of *inefficiency*. Cut out the intermediate and it helps some, but is still wasteful of effort, and effort costs money.

Spending thousands of dollars for efficient opening machinery, and then winding the cotton up into as tight a lap as possible, is a wasteful and harmful practice. It wastes power, and damages the cotton.

Combining all pickers into a continuous machine, which takes loose cotton in one end and turns finished laps out of the other is the efficient way.

Reducing costs often means simply lowering quality, which is generally foolish; but if costs can be reduced by changing machines to make them do their work in a different and better way, it is more foolish not to do it.

Pickers combined by the Aldrich Synchronized Single Process method do better work, and do it cheaper; enough cheaper to pay for the change in from six to eighteen months. This is not merely a statement, but a fact which can easily be verified by asking those who have made the change. Over 200 installations are paying nearly 100% on the investment, with savings ranging from 50% to 200%.

AldricH MachinE

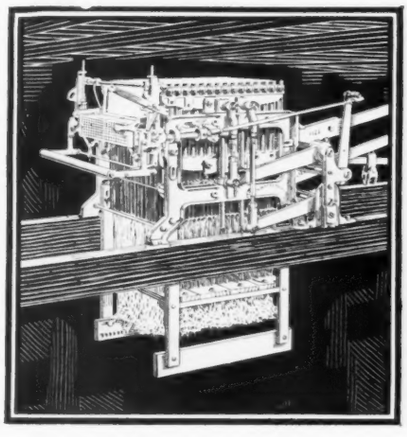
Greenwood, WorkS South Carolina

Must You Continue to Forfeit Part of Your Profits . . .

. . . to obsolescence? In the face of today's buying methods — everything within your plant must yield the maximum profit to offset present price-paring. More than ever before, it is of utmost importance for you to be certain that you are not forfeiting to obsolete machinery part of profit rightfully yours.

• What about it? Overwhelming opinion in the industry points to only one answer—replacement. Your jacquards—for instance. Every improved Halton's Jacquard returns your full share of profits—allows you to meet today's prices with less sacrifice. How? By lowered maintenance costs, by greater versatility, by faithful rendition of salable designs. • Southern Pile Fabric Company, Primrose Tapestry, and Stauffer Dobbie, Ltd. are using Halton's Jacquards.

• Go deeper into your costs! Retrieve some of these leaking profits! The first move is to write for our catalogue that shows all the mechanical details. Will you—Today?



HALTON'S JACQUARDS

THOMAS HALTON'S SONS, "C" and Clearfield, Phila., Pa.

Selling Agents H. A. FORBES, P. O. Box 1663, PATERSON, N. J. . Tel. Lambert 385-92W
DENNIS J. DUNN, 5th and College Streets . . . . . CHARLOTTE, N. C.

The dollar you spend *now is worth $1.50*

The dollar you save *now is worth 75c*

A LOT of people feel just now like the old Negro who came to the crossroads and saw one sign pointing to heaven and another sign pointing to hell. He shook his head and said to himself, "Ef Ah goes to Hebben, gotta fly all the while; ef Ah goes to Hell, gotta jump all the while. Ah giss Ah'll jes' set here an' rest mahse'f."

BUT resting is rusting. This is true of dollars.

IF those of us who *have* money just *leave* it to *rest*—the wheels of industry keep on rusting. Wheat and cotton and corn keep on piling up in warehouses. Our neighbors keep on hunting for jobs that don't exist.

NOW, it's wrong to spend our dollars foolishly, just for the sake of spending. But a lot of us are *saving* dollars foolishly—just for the sake of saving—without realizing that the dollar we save today has a decreased *earning* power compared with the dollar we saved in 1929. But the dollar we *spend* today is worth $1.50 in value received.

MOST prices are way down—further down than they were even in 1921. Eggs and butter and flour and clothing and furniture are way down—and that means values are way *up*. This is the greatest *buying* time we'll see again for many years.

PRETTY soon, these prices are going to start up—some prices have already started up. When they do, we'll have to pay *more* for the things we need *right now*. We shall have lost the chance to get that new suit or dress or chair or bed or radio or automobile—at a bargain!

BESIDES, if we buy these things *now*, we'll put somebody to work who needs a job even worse than he needs charity. If we put him to work, he can buy the things *we* make or sell, and that will help *us*.

HARD times? Not if we harness our dollars and hitch them to the wagon, instead of leaving them in the stable.

THE NATIONAL PUBLISHERS' ASSOCIATION

"To use available income to purchase goods normally needed and in the replacement of which labor is employed, is a condition precedent to any hopeful program to constructively increase employment."

From the Recommendations of the Committee on Unemployment Plans and Suggestions, of the President's Organization on Unemployment Relief.

Here is the improved reed which has upset old ideas

THE NEW *Custom-Made* REED BY EMMONS

Accept this offer

FOR many years mill men have been ordering "standard" and "stock" reeds. Now Emmons has perfected a new Custom Made that has upset old standards—gives you a new reed made exactly to your requirements.

Custom Made Reeds *fit* your fabrics exactly, for they are made *for* them, built to your own order. As a result you enjoy a new freedom from reed marks and uneven warp spacing; a reduction in broken ends caused by reeds that do not fit.

Many mills have already switched to these new reeds to gain their production benefits—and they report improved "cover" and better quality weave. You too should get better results from a reed made to fit than one which doesn't fit.

How You Benefit

Suppose you are weaving voiles and want extra strength of dent—you merely specify it. This added strength is Built-In the Custom Made Reed made especially for you. You get exactly what you need—it fits.

Or if you are running broadcloth and require extra air space, you order it. The Custom Made Reed you get has it—air space up to 60%—soldered all the way across, if you require it. You get the reed that fits—exactly.

Yet there is no extra charge; Custom Made Reeds cost no more than ordinary reeds. But you get more because you get exactly what you need—a reed that fits.

Accept This Offer

If you have not yet tried the new Custom Made Reeds, we invite you to do so, and gain these benefits. Try a reed at our risk. Just fill in the coupon below—tell us the weave construction; what you need. You'll get it, built-in the Custom Made Reed.

Then if you are not entirely satisfied—if you don't get all the benefits we claim, return the reed to us, and the charge will be cancelled without hesitation.

Or better, if you are about to buy reeds, specify Custom Made Reeds on half your order; ordinary reeds for the remainder. Equip a section with each and note the results. Then you alone will be the judge of the added advantages of Custom Made Reeds at no extra cost.

EMMONS LOOM HARNESS CO.

Non-Slip Mail Eye Harness — **Multiple Air Space Reeds**
Chafeless Cord Harness — **Custom Made Reeds**
Wardwell Loop and Doll Pickers

C-6-32

Emmons Loom Harness Co.
Lawrence, Mass.

Gentlemen: I would like to try the new Custom Made Reed and attach, herewith, my specifications. If this reed is not all that you say I will return it within 10 days and you will cancel the charge; otherwise bill me in the regular way.

Name _____ Address _____

Improve reed accuracy and you improve weave quality

800 Fafnirs are economizing *for Mt. Vernon-Woodbury Mills*

4 YEARS OF PRODUCTION have passed since these Fafnirs were installed in 116 spinning frames in this large South Carolina mill. Savings in power, alone, have proven conclusively that the investment was a decided economy. This reduced current consumption is but part of the savings which the Fafnirs are providing and will continue to provide for years to come.

Higher and more uniform spindle speeds are obtained because the friction load is reduced considerably. Maintenance costs are cut to practically nothing—the only attention required being normal lubrication. Through the elimination of wear and vibration in the bearing, not only is bearing life greatly increased but also the life of tapes, cylinders and the entire machine.

Economical, too, is the ease with which Fafnir Boxes are installed. In fact, the wide inner ring ball bearings used in this equipment rival plain bearings in their simplicity of mounting. And they are positive in action —no wedges to work loose—no adjustments, ever.

You can buy machines of every type equipped with Fafnirs—and can quickly replace plain bearings with Fafnir Wide Inner Ring Ball Bearings, with little or no change in housing design. Ask to have one of our representatives survey your plant for power transmission economies. You incur no obligation.

THE FAFNIR BEARING CO., NEW BRITAIN, CONN.

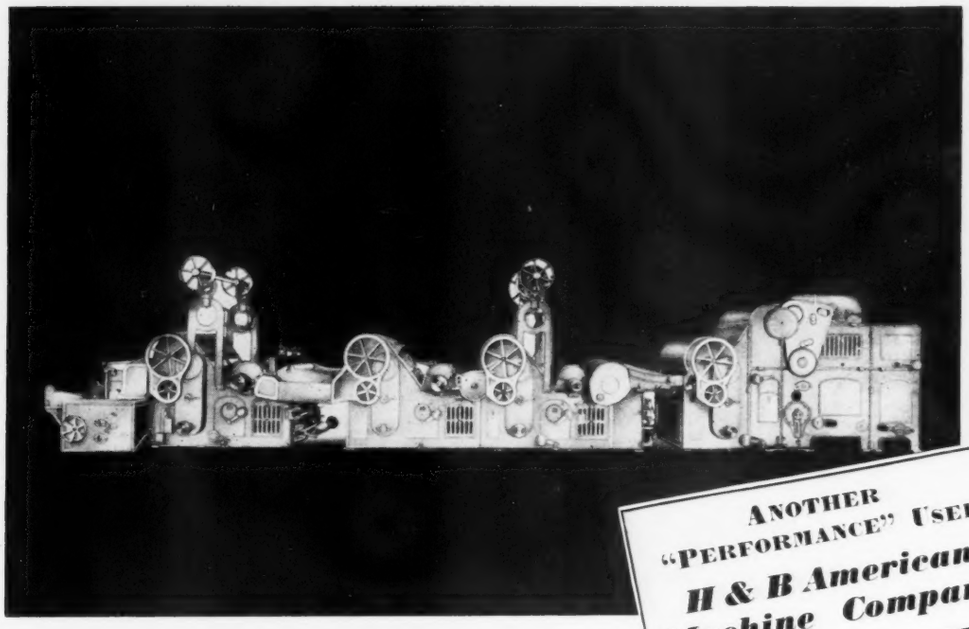
Representatives also at

Atlanta, Ga.; Charlotte, N. C.; Dallas, Tex.; Houston, Tex.; Boston, Mass.; Birmingham, Ala.

FAFNIR BALL BEARINGS

LOW COST OPERATION IS CERTAIN WITH SKF

DEPENDABILITY

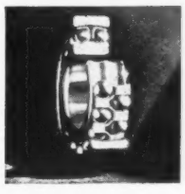


ANOTHER "PERFORMANCE" USER
H & B American Machine Company

WHERE PERFORMANCE TAKES PREFERENCE OVER PRICE

No better assurance of continuous operation with comparatively little maintenance could be made by H & B than the equipping of their A-1 One Process Picker with SKF Ball Bearings on the beater, fan and cone shafts. Here is protection from one end of the machine to the other that means the utmost dependability at all times.

SKF Ball Bearings have proved so successful on pickers in the past that when this one process picker was designed it was only natural that SKF's should be selected. The smooth running qualities of SKF's, their freedom from wear and elimination of bearing adjustments insure low costs and an improved product. All these are sufficient reasons why SKF Performance Takes Preference Over Price.



● *You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little.*

2880

SKF INDUSTRIES, INC. 40 EAST 34th STREET, NEW YORK, N.Y.

SKF

Ball and Roller Bearings

COCHECO—

The Broad Path to Economy in Power Transmission

For power transmission with minimum waste—COCHECO!

For long efficient belting service—again, COCHECO!

For "long run" belting economy—always, COCHECO!

COCHECO Belting, made of the best leather correctly handled from the hide to the finished product, offers highest quality and maximum satisfaction in power transmission service in every type of drive in which leather belting is used.

Our "Book on Belts" gives details on COCHECO Belting—how it is made and why users of leather belting all over the world find it most economical.

I. B. Williams & Sons, Dover, New Hampshire

DETROIT CHICAGO GREENVILLE, S. C. NEW YORK PHILADELPHIA

The UNKNOWN EQUATION *in Cost!*

The losses in production costs which cannot be predetermined with accuracy are founded largely on one equation alone—faulty lubrication.

Of course a certain amount is set down against costs for spoilage, breakdowns and repair bills. But to determine accurately in advance *just how much* these losses will subtract from eventual profits seems impossible.

Instead, therefore, of muddling our brains with attempted divinations of how much our *losses* may be from these sources, let us rather consider how much our *profits* may be increased by largely doing away with those losses.

Alemite High Pressure Lubrication Systems plus Alemite Specialized Lubricants are saving many of the leaders in the textile industry untold thousands of dollars annually in unnecessary losses from breakdowns, repair bills and lost time which are traceable to inefficient lubrication.

If you want to learn fully of the vital savings made possible through this combination, write today for a lubrication survey to be made in your own mills under your own operating conditions. The findings you will be shown; will amaze you!

Alemite Corporation, (Division of Stewart-Warner) 583
2682 N. Crawford Ave., Chicago, Illinois

Gentlemen: I am interested in information leading to the reduction of costs through proper lubrication.

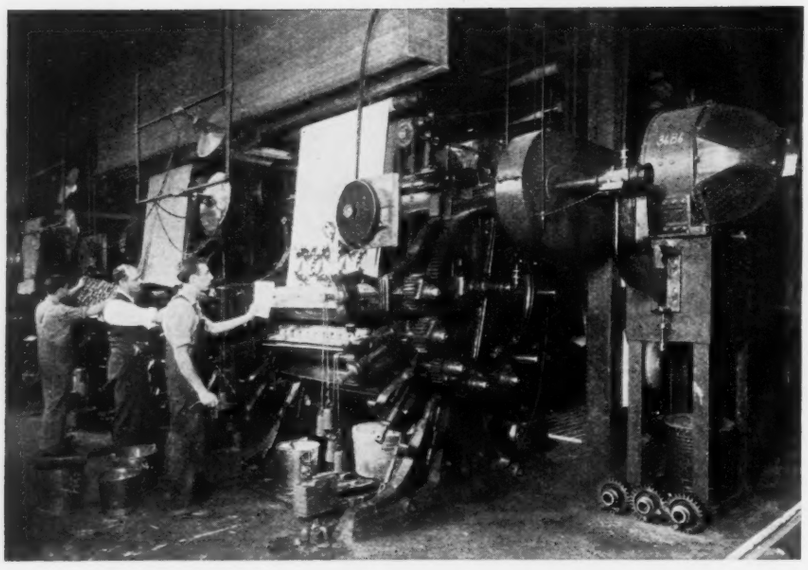
Name .....

Company .....

Address .....

PIONEERS IN SPECIALIZED LUBRICATION FOR INDUSTRY

MOTOR AND CONTROL *MUST* BE RIGHT



A group of 8-color printing machines driven by 35-hp. Westinghouse Type SK Motors with a speed range of 8 to 1. Dry cans in rear are driven by 3-hp. Westinghouse Type SK Motors.

for

Cloth

Printing

Machines

WHEN you thread the grey cloth in the printing machine—it is then that you will appreciate the advantages of a drive for cloth printing, designed and applied as a unit by Westinghouse engineers.

For years, Westinghouse engineers have had an exact knowledge of printing machine requirements. They have developed the Westinghouse printing machine drive that operates smoothly and economically from the slowest threading-in speed to maximum printing speeds. Anticipating more exacting demands, they have made many improvements in motors and control that assure even greater simplicity, reliability and flexibility of operation.

In addition to printing machine drives, Westinghouse supplies specialized motors and control for other finishing plant machinery such as calenders, tenters, mangles, etc., including the unique new Westinghouse drive for Sanforizing Ranges.

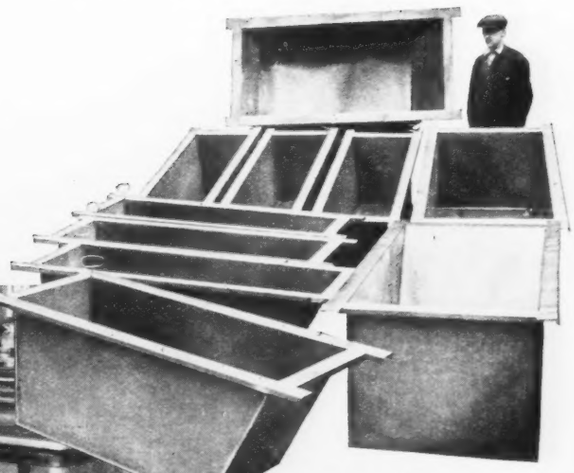
Submit your finishing machinery drive problems to experienced Westinghouse engineers. For full details on any particular drive, write the nearest sales office.

T 79134 **Westinghouse**

Quality workmanship guarantees every Westinghouse product

MONEL METAL DYE TANKS

insure clear colors...
protect fine fabrics...
speed up production



Typical light gauge, lock-seamed and silver soldered Monel Metal dye tank linings for wood, concrete or metal tanks.

•

Heavy gauge, self-supporting welded Monel Metal dye tanks.

● The constant search for improvement...for better, more economical methods of textile dyeing...is reflected in the rapidly increasing use of Monel Metal for dye tank linings. The rare properties which have made Monel Metal the standard material for dye tank construction can be summarized for easy reading as follows:

1. Resistance to action of practically all chemicals used in dyeing cotton, silk and rayon.
2. Freedom from danger of rust and other metal stains.
3. Smooth, glass-like surface safeguards the most delicate fabrics against injury.
4. Monel Metal has no harmful effect on dye shades commonly used.
5. Ready cleanability permits frequent change of batches and efficient use of floor space.
6. Permits different operations to be carried out in the same machine: Light colors can follow dark colors: Certain types of bleaching, degumming, washing and stripping can all be done in the same Monel Metal equipment.
7. Long life of Monel Metal linings proved by hundreds of installations in all types of dye house service.

Heavy gauge, welded Monel Metal construction is recommended for large, self-supporting dye tanks. For small tanks and vats, light gauge, lock-seamed, silver soldered Monel Metal linings provide adequate strength and durability. Both heavy and light gauge Monel Metal linings can be readily built to your individual dyehouse requirements by your regular fabricator. Consult him—and write for a copy of the new "Illustrated Buyers Guide and Catalog of Monel Metal Textile Equipment".

Write today for your copy of this useful buyers' guide. You'll find it extremely helpful in planning dyehouse equipment installations. It also contains names and addresses of fabricators who can supply you with Monel Metal equipment.

INCO MONEL METAL

A HIGH NICKEL ALLOY

MONEL METAL

NICKEL ALLOYS PERFORM BETTER LONGER

Monel Metal is a registered trade mark applied to an alloy containing approximately two-thirds nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

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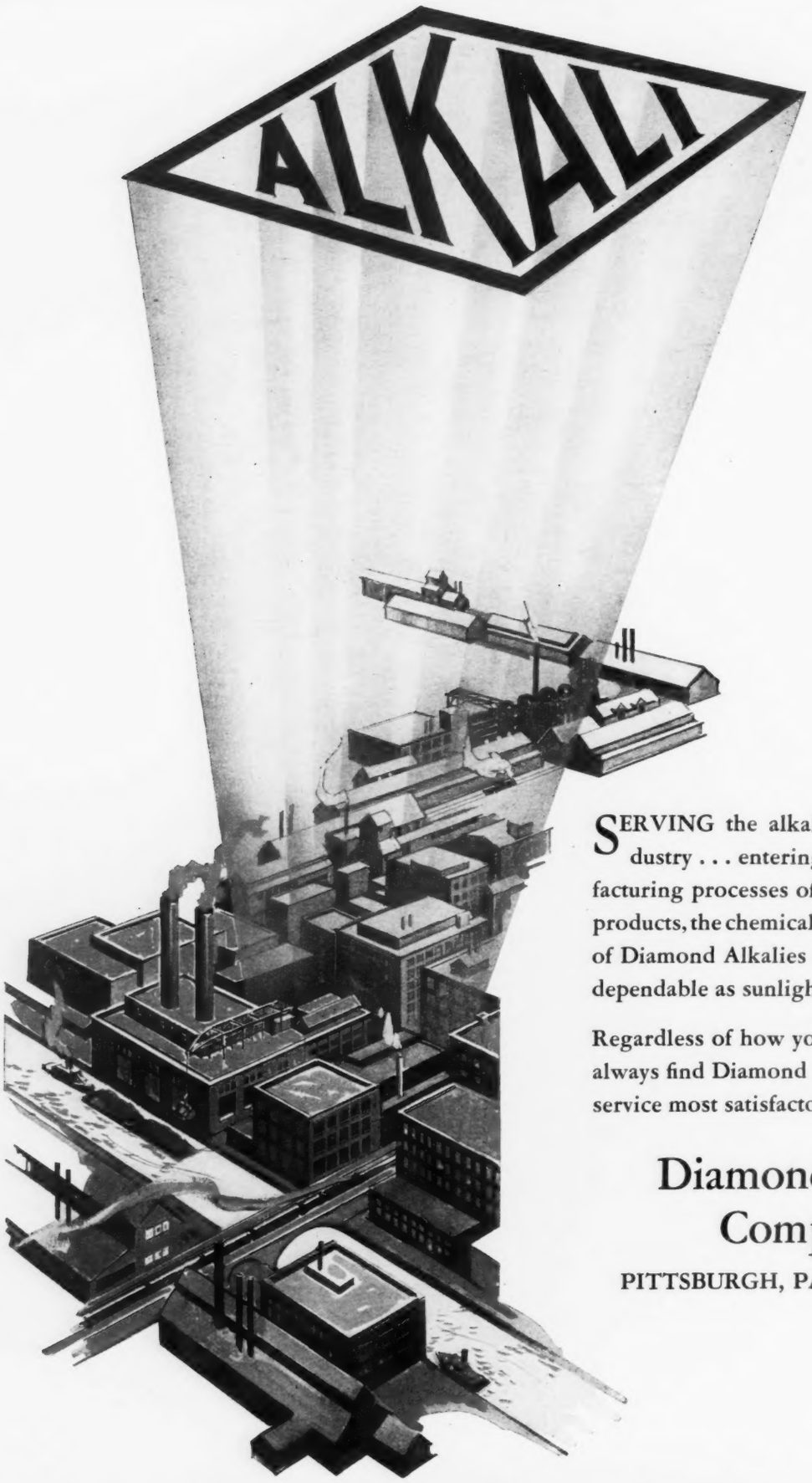

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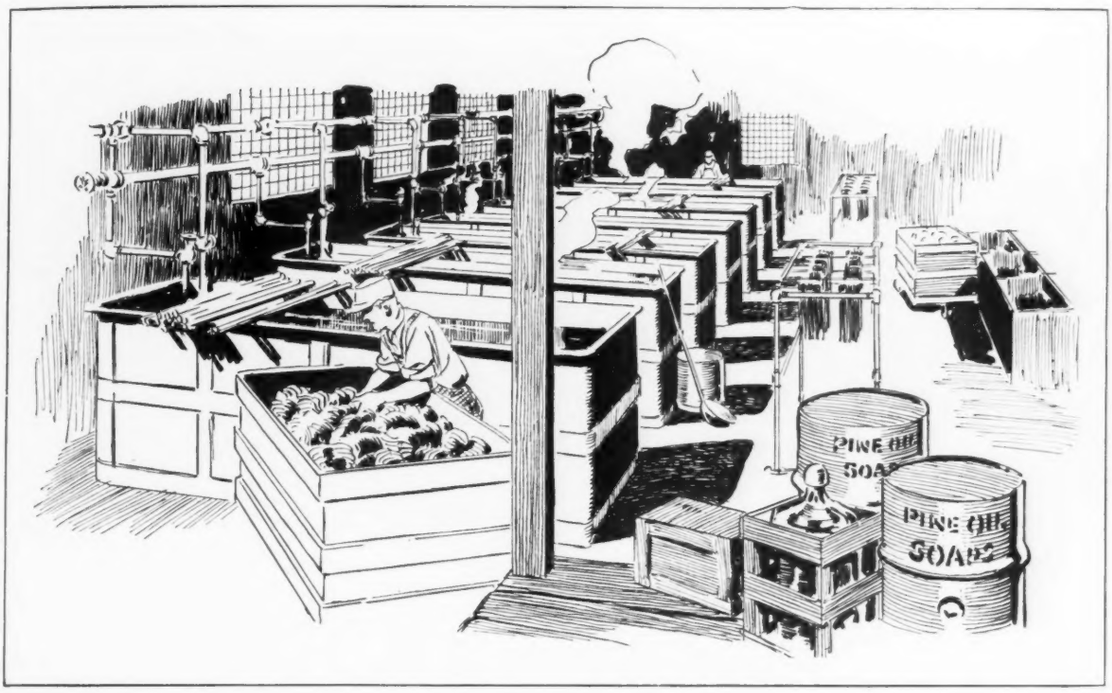

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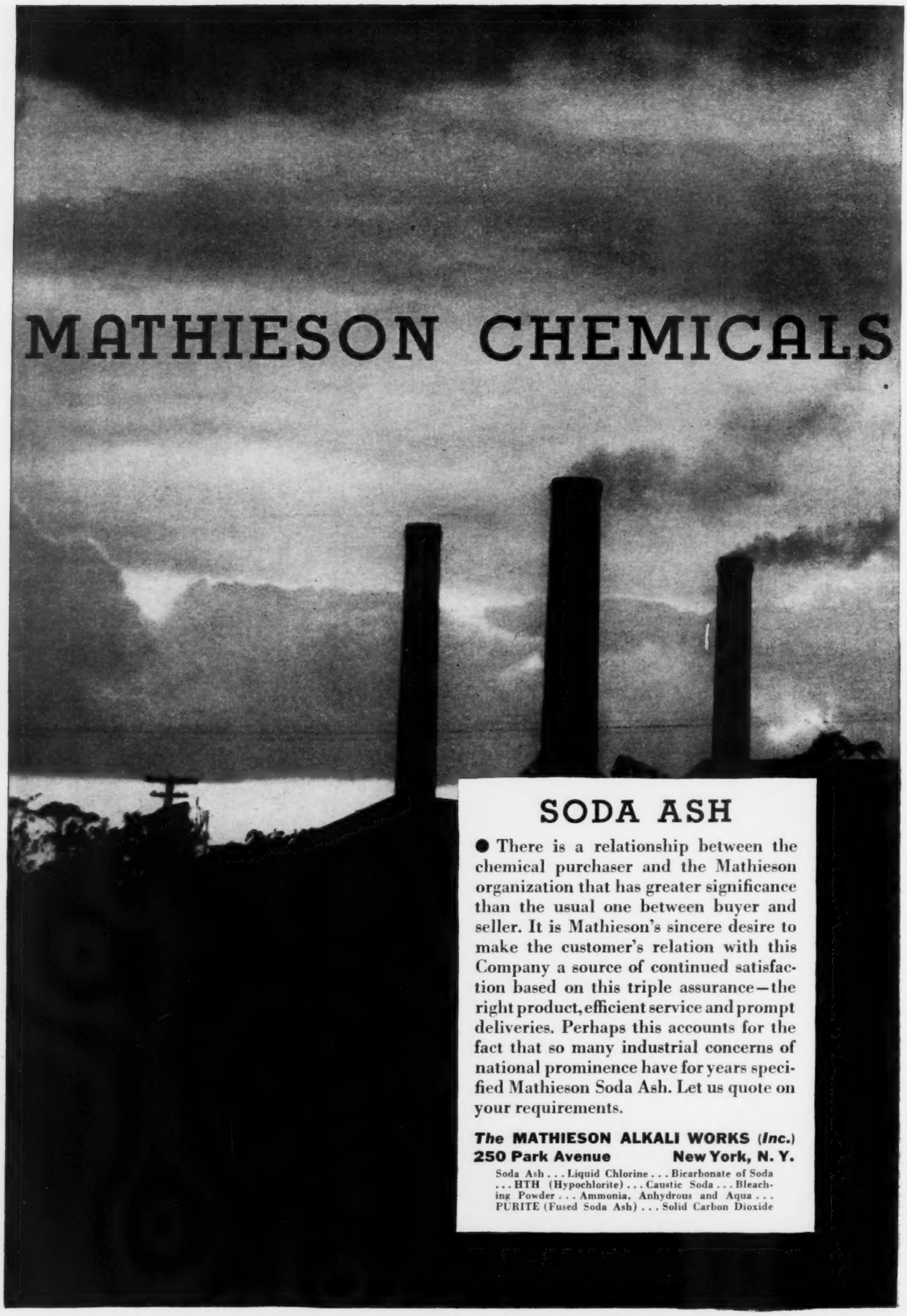
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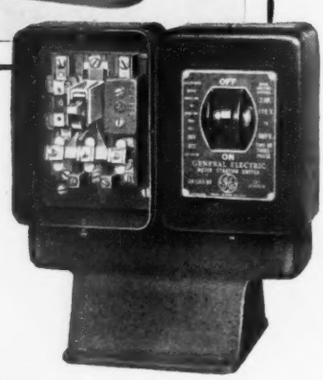

The new CR1062-B3 loom switch, double pedestal mounting

The CR1062-C2, 7 1/2-hp. loom switch

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GENERAL ELECTRIC

Vol. 96 **COTTON** No. 5

May, 1932

W. R. C. SMITH, Publisher
T. W. McALLISTER, Editorial Director

ROBERT W. PHILIP, Editor

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Published Monthly by

W. R. C. SMITH PUBLISHING COMPANY

Atlanta, Ga.

JOHN B. SHAW, *sales manager*, 39 Grove St., Auburndale, Mass. Boston Exchange, West Newton 1031.
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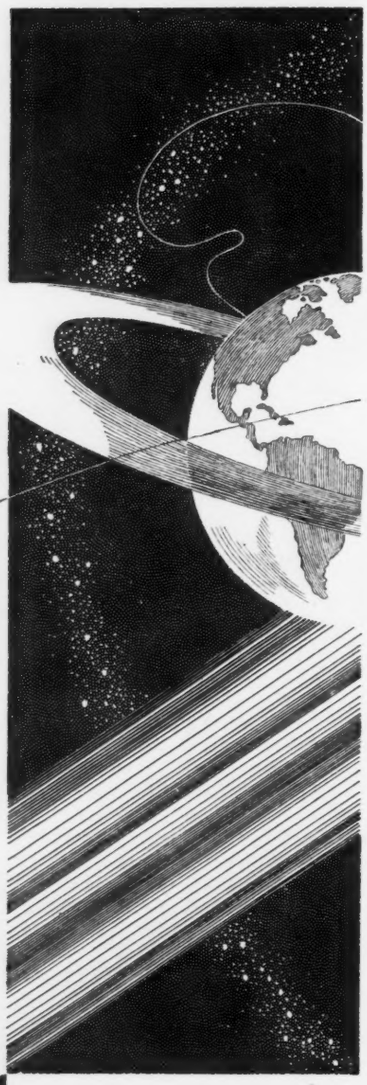

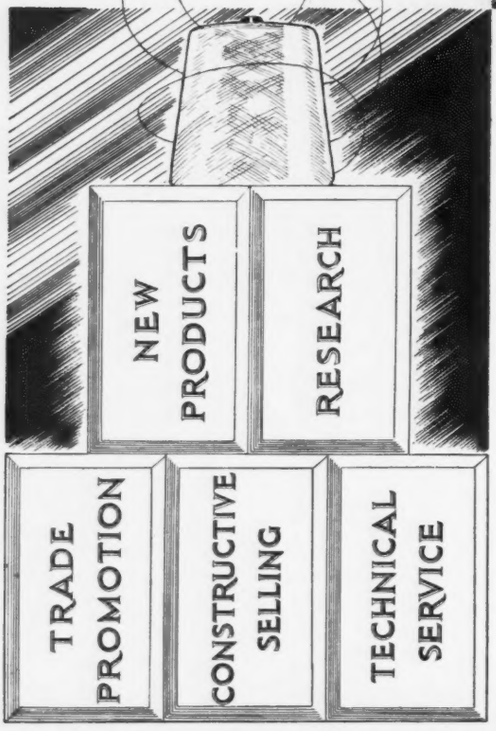

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COTTON

Vol. 96 June, 1932 No. 6

An Organized Organizer

A Word Picture and Brief Biography of the New President of the American Cotton Manufacturers Association . .

BACK in the late years of the past century, when Coney Island was in the hey-day of its glory as an entertainment center, there was, down in South Carolina, a fun-loving youngster who had been regaled many a time by more fortunate acquaintances who had enjoyed the thrills of this essential adjunct to a visit to the Big City.

This young lad had begun his life's labor at a job as sweeper in the Pelzer Cotton Mills and had risen to the position of head doffer and had received, subsequently, schooling in the public schools in his home town of Williamston. Having with purpose laid aside the necessary funds from his earnings, he betook himself on a trip to New York, on his own, and indulged to the fullest in the thrills and excitement of the day afforded at Coney Island, and returned home wearing, as proudly as ever a crusader wore the colors of his cause, a placard announcing, "I Have Shot the Chutes at Coney Island!"

And to this day, after a business career of enormous proportions, which has been compressed into little more than three decades, and with which this sketch shall deal, he confesses frankly that the experience represents the greatest thrill of his life.

Captain Billy Smith, at about the same time a veteran conductor on the old Greenville & Columbia Railroad, knew this youngster well, for many was the time that the benign old captain found the lad as a stowaway on his train, thrilling to the activity and energy pulsating within the accommodation train whose arrival at Williamston had become part and parcel of his youthful existence.

These two seemingly trivial incidents in the early life of Benjamin Brown Gossett, who has just been elevated to the presidency of the American Cotton Manufacturers Association, in reality become important in an effort to present briefly the biography of the man, and a study of him as a man and a personality.

For the purposes of record, it will be stated first that Ben was born August 18th, 1884, at Williamston, S. C., the son of Mr. and Mrs. James Pleasant Gossett. Living the life of a normal lad, which included the surreptitious acquaintance with Cap'n Billy and his charge—particularly, when the Cap'n permitted, intimate association with the engine—at fifteen Ben entered Clemson A. & E. College which he attended for two years.

But due to a natural inclination toward the glamor and thrill of "railroading", we find him next as night seal clerk for the Central of Georgia at Augusta, Georgia, where the greatest attraction seemed to be the privilege of riding the engine to and from the yards five miles each day.

Railroading was all right, apparently, but the 'teen age brought to Ben an enlarged vision of activity and adventure—and military service seemed to offer a greater field. While at Clemson he had entered the examination for entrance to the West Point Military Academy, and, in view of his excellent showing in this previous examination, while railroading at Augusta he was given the appointment of Cadet at the United States Naval Academy in Annapolis, where he studied for two and a half years, subsequently transferring to the Marine Officers' School where he received, on his 21st birthday—August 18th, 1905—a commission as Second Lieutenant in the Marine Corps.

In the meantime, Ben had met and won the heart of an Annapolis girl, Miss Katharine Coleman Clayton, and they were married on December 19th, 1906. Shortly afterward, the Army of Cuban Pacification was being formed, and Ben, with his bride, was in Cuba until June of 1907.

To digress somewhat from the chronological sequence of our story, we find Ben's urge for military service evidencing itself at the time of the Mexican Border trouble in 1916, after he had established himself with a record as a textile mill executive, as we shall later record. Ben had formed and was the captain of a crack machine gun company, composed of picked men of South Carolina. The only trouble

was that the company, despite its excellent personnel, didn't possess a machine gun! By the time Ben had penetrated sufficiently the Army routine necessary to procure one, peace was established before they had an opportunity to reach the Mexican border.

Again, when the United States entered the World War, the urge for action expressed itself, and Gossett was commissioned a captain in the Chemical Warfare Division, taking his training at Lakehurst Gas School. Again, after having received orders for overseas service, his hopes for active service were thwarted by the signing of the Armistice, and he returned to Lakehurst as instructor, subsequently being released from service and returning to his business duties. Prior to his enlistment in actual service, he had served for a year as Federal Fuel Administrator for the State of South Carolina, under Dr. H. A. Garfield, National Fuel Administrator, who reluctantly accepted his resignation from this position to enter military service.

Returning now to the record, Ben resigned from the service and returned in 1907 to Williamston, where meanwhile his father had taken charge of the Williamston Mills, a print cloth plant. The elder Gossett was also head of the local bank, and Ben served in the dual role of general assistant in the bank and office man for the cotton mill. When the assistant secretary of the mill resigned to accept another position, Ben took his place, and later, succeeding another man who resigned to go to another mill, he became secretary, in 1909.

His First Mill Position.

In that same year, Ben was asked to take also the position of assistant treasurer of the Brogon Mills at Anderson, and he held this position, together with his job at Williamston, living in Williamston, until December 1912. In the meantime, he had organized and was serving as president of the Calhoun Falls Bank at Calhoun Falls, S. C.

Ben's innate ability in management, and in organization, had now become generally known, and during the latter part of 1912, the owners of the Riverside Manufacturing Company and Toxaway Mills, at Anderson, desired his services as president and treasurer of these properties, which position he accepted, while less than 30 years of age, on January 1st, 1913, removing his family to Anderson from Williamston on that date.

He held this position, as well as his connection with the Brogon Mills and the Williamston Mill, regularly, and on November 18th, 1921, he removed to Charlotte, N. C., to assume in addition to his other duties the position of president and treasurer of the Chadwick-Hoskins Company with mills in Charlotte and Pineville, N. C., and of the Martinsville, Va., Cotton Mills. From 1918 to 1923 he was as well active head of the Cohannet Mills (now the Southern Franklin Process Company plant) at Fingerville, S. C.

In 1920, the Panola Mill at Greenwood, S. C. having become involved in a business way, was in the hands of creditors. Increasing interest was being expressed in the competency of the rising young mill executive, who had won his spurs by a sensible attitude and method of management, and Ben was selected as the representative of both the stockholders and creditors of Panola. He assumed general managership of this property, and within two years had successfully liquidated the indebtedness and returned the property, after discharging all obligations to creditors, to the stockholders.

Upon removing to Charlotte, Gossett resigned as president of the Toxaway Mills, and as vice-president and assistant treasurer of the Brogon Mill, retaining, at the insistence of the principal owners, the presidency of the Riverside Mfg. Company.

In 1926, Gossett, with his father and other partners, had secured controlling interest in the Toxaway Mill and Riverside Mfg. Co., as well as the Williamston Mill, and had organized the Lad Lassie Mill and the Gossett Dyeing and Finishing Company at Anderson. In that year all of these properties were consolidated under the name of Gossett Mills, with J. P. Gossett as president and Ben as vice-president and treasurer.

Thus, to recapitulate, his present active duties of a mill nature are: president and treasurer, Chadwick-Hoskins Co. and Martinsville, Va., Cotton Mills; and vice-president and treasurer, Gossett Mills, Anderson, S. C.

During his mill experience, Gossett has served as director in many textile and other industrial concerns. These included the Judson Mills and Southern Worsted Corporation at Greenville, S. C. At the present, however, he has relinquished active connection with practically all concerns with which he is not directly connected and now holds directorships in Pelham Mills, Calhoun Mills, Carolina Textile Corporation, Republic Cotton Mills, Turner, Halsey & Co., New York, and the Piedmont and Northern Railroad, as well as being president of the Hoskins Corporation of New York, a holding company. He is as well southern vice-president of The Cotton-Textile Institute, Inc., which he aided in creating and to which he has contributed much in the way of service and accomplishment.

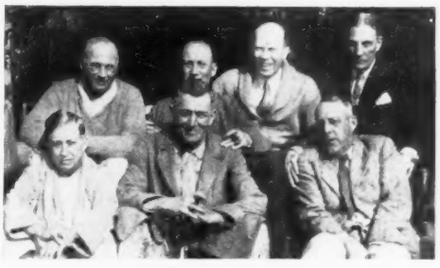
This somewhat lengthy, factual record has been introduced largely for the purpose of leading up to a picture of the man involved, as an executive and as a personality. There is about the man whose business life has followed so consistent and enlarging a field of accomplishment a natural interest as to those elements of personality and leadership which were necessary to the successful administration of so progressive a career and such ramified and extensive activities of the man who has now received the highest honor within the power of his fellow southern cotton manufacturers, as a body, to bestow.

The answer is found in three words: ability, a faculty of organization, and leadership.

For Ben Gossett has, in the first place, ability of the highest order. To this he has added an unmistakable talent for organization, which goes back

to the little bank at Calhoun Falls, his successful handling, as an extremely young man, of the Brogon and Panola Mills, and the growth and success of the Gossett Mills and his other enterprises. Handling actively two man-sized jobs in different States, Gossett has built up at each group of plants an organization to function smoothly and efficiently. It was but natural that in doing this, he should organize himself so that he might encompass the ramifications of the work, and a testimony of his methods is indicated in his own systems of management, whereby through regular reports he keeps a finger on the pulse of every major phase of his business, with accuracy and despatch, from his own operating headquarters in Charlotte.

This does not in any sense imply absentee management on his part, for Gossett is in every sense an active, working executive, and his time is almost regularly divided between his plants in South Carolina and those in North Carolina and Virginia, and his selling organization in New York, where he is constantly spending more and more of his time to keep pace with developments in merchandising. This requires lots of traveling, of course; but it is doubtful if the thrill of Cap'n Smith's "local" has ever left Ben's inner self, and a safe assumption is that he still finds stimulation in this requirement upon him which would be irksome to a less adventuresome spirit.



With Friends at Point Peter.

Front row, left to right: Ben Gossett, Will Vereen and Sanford Kelly. Back row: Russel Leonard, Vic Allen, Jack Brantley and Jim Robinson. (Photo by Chip Robert.)

Gossett approaches any task set before him with a determination and purpose of completing it promptly, thoroughly and efficiently. At times with a disregard of his own convenience and personal welfare he applies himself to the work in hand—and by this example, and a magnetic personality and honesty of purpose, exhibits the inspiration of leadership to his co-workers. Meticulous himself as to his word and his responsibility, he looks first in choosing his associates for character, then for loyalty, then for ability. Humanly tolerant of shortcomings, he is well-nigh intolerant of deception, misrepresentation and chicanery—these, to borrow one of his own favorite expressions, will "sap and undermine" an organization, and he has no patience with dishonesty in thought, action or otherwise.

Gossett's business policies are conservative, but not reactionary; progressive but not radical—a well-balanced program calling for progress leavened with the understanding of careful thought. It was not entirely his sociable and fraternizing nature which made him one of the first in his industry to recognize the necessity for close co-operation, his activities in associational activities and his labors for the Institute being a demonstration of his feeling. He saw it as a practical, business necessity for the group as a whole.

Recognized for his broad, sound policies, Gossett's aid and advice is eagerly sought by many. Ready to respond, his views are slowly formed, and clearly-expressed, concerning the question in hand. His sane attitude, his convincing manner, his attractive personality, make him an outstanding figure in any gathering.

And, while retaining an active interest in manufacturing, for several years he has been devoting more and more of his time to the merchandising of his mills' products, recognizing this as the phase of the business demanding attention—active, personal attention— if profits are to be made.

When the trend toward finishing, and diversified products, began its influence in the South, Ben Gossett was in the vanguard of progressive leaders in broadening the products of his Anderson plants, including the establishment of a dyeing, bleaching and finishing plant.

As a demonstration of his reasoning along this line, as well as of the thorough manner in which he tackles a job before him, this Spring Gossett closed his Charlotte office temporarily in order to transfer his base of operations to the market place, Worth Street in New York City where he concentrated his attention upon the merchandising of his goods. He thus returned to Charlotte with a more intimate knowledge of selling methods and problems.

In his personality and nature is found much in explanation of Ben Gossett's success as an executive and as a leader. Sincere to the core, warm of disposition and affection, his is a nature which is genuinely human in its response to friendship and sensitive to offense. Rich in cordiality and sympathy, his loyalty to a friend or to a purpose is of that intense pattern which makes him jealous of either. His utter frankness and openness make him instinctively expect and appreciate these qualities in others and immediately inspire confidence and loyalty.

From the intensity with which he applies himself to the constantly pressing demands of his many and extensive business duties, he finds his happiest and most enjoyable—and therefore his most helpful—relaxation with his friends. His warm and friendly spirit, and his personality and adaptability, make him a most congenial companion for any occasion. His joy in companionship, his ready adaptability and keen pleasure in knowing people for what they are, result in a constantly expanding host of friends. His friendships are all reciprocal; one of his favorite expressions is, "You're growing on me", by which he means, "I have found you sincere and honest, and I like you and want you to like me".

Ben's chief diversion—he has no especial hobby—is to join a group of his friends for any kind of a social occasion. By his own confession, he's "the world's poorest left-hand golfer," not even excepting his good friend, the Governor of North Carolina, who also "stands on the wrong side of the ball", and with whom Gossett plays frequently during the summer.

Gossett is congenial company in almost any form of diversion, but nothing will cause him to release himself from his many duties so much as an opportunity

to join a group of friends, whether it be to go down to Point Peter to fish; to New York; or Florida; or the mountains above Walhalla, S. C., or to enjoy congenial fellowship at home. In such an atmosphere he becomes the gracious host or the ideal guest—and finds his nearest approach to that first thrill, when he "shot the chutes at Coney Island."

Gossett lives in Charlotte. He has two sons—James P. Gossett, II, 21, now a Senior at Yale, and Philip, 17, now in preparatory school in New Jersey. One daughter, Katharine, is now Mrs. S. Franklin Jones of Charlotte.

He is a member, with his family, of the Myers Park Methodist Church of Charlotte, and holds membership in the Charlotte Country Club, the Southern Manufacturers' Club, the Myers Park Country Club, of Charlotte, and the Army and Navy Club in Washington. He is a member of the New York Southern Society, the North Carolina Society of New York, the Sons of the American Revolution, the Meekenburg chapter of which he is a past president, the Sons of Confederate Veterans, and the United Confederate Veterans, in which he was appointed Brigadier General on the staff of the Commander-in-Chief in 1928. He is a member of the American Legion, a Mason and Shriner, and the Improved Order of Red Men, of which he is a past Sachem. He is a southern democrat, and was a delegate from South Carolina in the National Democratic Convention in Baltimore which nominated Woodrow Wilson for the presidency. At one time he was a member of the Board of Conservation and Development of the State of North Carolina, a trustee of North Carolina A. and E. College, and a member of the Board of Visitors of Clemson College.

Smart Management---What Is It?

Another Sermon by Dunhill Marsden.

ALMOST every industry passes through a period when any poor boob can be a success, a period when the industry is trying to grow as rapidly as the demands for its products, and can't quite make the grade. Prices are high; demand is constant, and as long as the wheels turn, the profits roll in.

The textile industry went through such a period. Pompous and dignified stuffed shirts in plug hats and frock coats; birds who didn't know a scutcher from a railway head, made vast reputations as astute and successful managers, when many of them couldn't manage the affairs of a popcorn stand unless there was a big demand for popcorn at inflated prices.

Those days have apparently gone forever; the good old days when the domestic demand was way ahead of the supply, and the unfailing recipe for prosperity was a higher tariff to shut out a little more foreign-made goods. The industry is well developed; many think overdeveloped. Competition is keen; production well above current consumption. It is a time when smart management counts.

What is management, anyway? Webster says, among other things that it is the "judicious use of means to accomplish an end". Isn't that descriptive? Using good judgment to get something done; and getting it done. Webster also defines the word, "manage": "to have under control and direction; to handle successfully, or cope with; to conduct; guide, administer; handle; control; to have the care of; to carry on." That just about sums it up. When you do those things you are managing something; but when you simply sit in an office and look wise part of the time and worried the rest, you are not doing any managing, unless it is managing to hold your job.

There is never a time when smart management pays like in hard times. If everybody is making a profit, management usually gets complacent and self-satisfied; with the smug feeling that because the concern is making profits it must be run right; while the truth of the matter often is that they couldn't help making a profit if they tried.

But in tight times, when the only man entitled to a natural profit is the red ink manufacturer, the fellow who can do the smartest job of managing is going to stand head and shoulders above the field, and show profits for his company when most competitors are showing losses. Smart management adapts itself to changing conditions, and always gets the most, or nearly the most out of a given situation, and with given opportunities.

Napoleon never fought two battles exactly alike. The principles of each action were alike, but the details varied to meet the exigencies of the day. No two baseball games are ever exactly alike; the same old bats, and a supply of similar balls will last out a season, but each game is a little different from the others. Smart management generally wins the most games, and often with inferior material. In early July, 1914, the Boston Braves were in the cellar; in October they won the World's Series in four straight games from a supposedly stronger team. George Stallings used the same players that had put the team in the cellar. The big difference was that he got the team to functioning; he managed it.

A manufacturing plant works much the same way; the machinery is there; the labor is there; the supervisory force is there; the market is there. The problem of management is to make the most of the situation. If either the machinery, the labor, or the supervisory force is not right for the given conditions, it can be changed to meet the conditions. That is, it can if management functions properly. If things are not changed to meet the conditions, then management has fallen down.

The finest mill ever built can go broke with poor management, while a very ordinary plant may be making money. This does not mean that a miracle man can take a bunch of old worn-out junk and wring handsome profits from it; a good manager will not have a bunch of worn-out junk on his hands. Smart management gets the tools to work with; miracles are not worked with obsolete equipment. Managing to get the needed equipment is also a part of the job of smart management.

"Management, the judicious use of means to accomplish an end". That's the idea. Stick to it, and you can't go wrong.

American Convention in Atlanta

Stress laid on increasing cotton consumption; action taken toward securing adequate jute tariff; B. B. Gossett elected president

ONCE again the American Association has, through a most successful convention, demonstrated its value by providing food for thought, an opportunity of intimate contact and reports of another year of constructive activity. Its Atlanta meeting, through its result-producing discussions of timely and fundamental problems, was a successful and profitable occasion. The complementary social and entertainment features contributed to the success of the event . . . . . .

THE RESULTS of the conventions of the American Cotton Manufacturers Association are many-fold — they provied the major common meeting ground of southern mill executives for closer contact and understandings; the programs develop much food for thought; and the reports reflect each year a greater activity and fruitful service to the industry. The 36th annual convention, held in Atlanta on May 20th and 21st, was no exception along these lines, and everyone present readily acclaimed it as the most successful and enjoyable of the conventions of this invaluable and profitable adjunct to southern cotton-textile manufacturing.

Cason J. Callaway, of LaGrange, presided as president of the Association. The meeting was held in Atlanta, the capital of his native state, as a tribute to his service to the association and industry. The headquarters were the Atlanta Biltmore Hotel. Despite adverse business conditions and a lack of co-operation on the part of the weather man, the attendance surpassed the hopes of the most optimistic, and the large number present contributed much to the success of the occasion. Undoubtedly, as was mentioned several times in the proceedings, this almost unprecedented attendance came largely as an evidence of the high esteem in which President Callaway is held by the southern textile industry, and as an added tribute to his leadership.

Cason J. Callaway, retiring president . .

B. B. Gossett, president of the Chadwick-Hoskins Corporation, Charlotte, and vice-president and treasurer of the Gossett Mills, Anderson, was elevated to the presidency of the association. (See biographical sketch on page 27 of this issue.) Donald Comer, president of the Avondale Mills, Birmingham, was made first vice-president succeeding Mr. Gossett, and T. M. Marchant, president, Victor-Monaghan Co., Greenville, succeeded Mr. Comer as second vice-president. W. M. McLaurine, the efficient secretary-treasurer, was re-elected.

There was evident, throughout the entire proceedings, a spirit of prevailing optimism and determination for the future of the southern textile industry, and this was reflected in the informal lobby discussions. This attitude was no idle phrasing of empty hopes, and stood out upon the basis of a full recognition of the problems which beset the industry and the many ailments therein which must be corrected. Fundamentally, however, courage resulted from the serious and effective manner in which prevailing problems were attacked—and many expressions were given to the thoroughly sound opinion that the cotton-textile industry of the South has gone far toward setting its house in order and that further work will be done along this line to the end that this industry will lead the way toward a sound and successful recovery from current difficulties.

The high-lights of the meeting centered around the further development of adequate marketing methods for the industry, and a determination to retain for cotton its logical and rightful place among textile fibers through the extension of its existing markets, concerted opposition to the inroads of foreign competitors, and the solution of its own chronic problems. The convention occurred, appropriately, at the conclusion of Second National Cotton Week; suitable recognition to this event being given in the wearing by many delegates of cotton apparel, numerous references to Cotton Week, culminating in a most suitable address by George A. Sloan, president of The Cotton-Textile Institute, Inc., sponsors of National Cotton Week.

The competition of jute, and means by which its effects upon the prosperity of American farmers, manufacturers and other interests may be met, was the subject of a large part of the discussion. In his annual address, President Callaway Callaway stressed this subject. Mr. Callaway spoke at the opening session on Friday morning, which, by the way, was the best attended general session of the association within the recollection of this chronicler. Mr. Callaway said in part:

Address of Mr. Callaway.

"Cotton is already more generally used for more purposes than any other commodity known. There are, in fact, over 900 major uses for cotton. In spite of this, America uses a smaller percentage of her cotton crop than of any other agricultural product of any appreciable size. For the last ten years, the

average percentage of the total growth of the following agricultural products consumed in America, was as follows: Wool, 99.55 per cent; corn, 98.26 per cent; oats, 98.11 per cent; wheat, 74.10 per cent; cotton, 45.07 per cent.

"Yet cotton probably means more to the United States, with the exception of food, than any other commodity. * * * If the people of the country can be made conscious of the unprecedented values which exist, they will realize that now is the time to take advantage of them. Everything that is done, therefore, to inform the buying public with reference to cotton and cotton goods will have the natural result of increasing its consumption, thereby aiding the cotton farmers, manufacturers, and merchants; and through the proper advance in the price of the staple, greatly benefitting America as a whole.

Donald Comer, of Birmingham, who was made first vice-president . . . . . .

"A large share of the responsibility for the increased consumption must rest upon the manufacturers themselves. * * * If the use of cotton goods were comparatively new, we would all realize the necessity of studying the markets; of creating additional uses; of improving our product; of advertising our wares to the ultimate consumer. We would not have gotten into the rut of taking consumption for granted, and we would be doing more nearly our part toward gaining for our industry its rightful share of the consumer's dollar. * * * Every effort should be made to insure the making up of the volume lost from normal channels by depression through the extended use of cotton in the channels where price makes it so attractive, from an economical viewpoint. Greater economy can be had from using rubber and fabric belts for power transmission, and improved production is also accomplished where the same care is used in selecting these belts as is commonly practiced in the selection of leather.

"At the present time it is cheaper for textile mills to use cotton wrapping than to use jute wrapping in shipping their products. Since, in addition, we employ our own cotton and our own labor, and produce a better looking package for our goods, this substitution of cotton for jute should be made universally and immediately.

"Our going into this subject thoroughly emphasizes to us the injustice to the American cotton farmer and the American cotton manufacturer of not providing for them a fair protection in the tariff on jute. Certainly it does not seem right that the farmer should have to take 6 cents or less for his cotton to justify a manufacturer in using American cotton and American labor to spin this cotton. This seems doubly unfair when we take into consideration the burden that the American cotton producer is staggering under, since the general high tariff is causing foreign countries to retaliate by their restriction of the use of American cotton, as much as possible. It is conservatively estimated that proper tariff protection against jute and jute products would automatically create additional American consumption of over a million bales of cotton.

"The combined exports of all American products are only about 10 per cent of the total production, but in the case of cotton, the exports have averaged over the last 15 years, around 60 per cent of the production. Furthermore, cotton has been the most valuable item in dollar volume of all exports. It is natural, therefore, that the bad features of the tariff are affecting American cotton and cotton goods more than any other American product and industry. * * * The present bill places a tariff on Egyptian cotton as a protection to growers of long staple cotton, but, of course, affords no protection to the great majority of farmers who grow the average staples. Jute is the import product which most seriously competes with our American cotton. The daily wage of an East India farm worker is 16 cents, and the average weekly wage of Bengal, India, mill workers is $1.80. The ability of the farmers and manufacturers of India to flood this country with their products rests solely upon wage scales and standards of living with which no amount of American initiative, energy and skill can compete.

"Of course, it was not intended that the present tariff should place such burdens upon the American cotton farmers and manufacturers, but these are the results. Now that they are confronted with the problems of using up the largest carry-over of cotton in history, the emergency is given added emphasis. If the great mass of our people could be awakened to what it would mean, directly and indirectly, to open up this new outlet for over a million bales of cotton, and to put thousands of workers on jobs making cotton yarns and cloths to replace this jute, I believe there would spring into action an irresistible demand for the simple justice of an adequate protective tariff on jute and jute products."

The subject of jute thus projected by President Callaway was discussed at length in the Friday afternoon session of the convention with the result of crystallizing opinion and thought on this matter into definite action.

Marketing Textiles.—by Melvin T. Copeland.

The concluding feature of the Friday morning session was a very able address by Melvin T. Copeland, of the Harvard Business School, on the subject of "Marketing Textiles". Dr. Copeland first became known to the textile industry some twenty years ago for his very able research work, "The Cotton Manufacturing Industry of the United States". He has since retained a close interest in and contact with textile manufacturing, and his remarks at the Atlanta meeting were based upon a background

of close and broad study of the subject and a willingness to speak on it frankly. He said in part:

"Cotton textiles include such a variety of products and go through so many trade channels that in this industry we encounter a large proportion of the marketing program starts with the point of view of * * * First, let us consider the make-up of the market. It is an axiom in marketing that any sound marketing program starts with the point of view of the consumers or users of the merchandise. In the cotton textile industry, we find it necessary at once to recognize certain major differentiations in the market. The major distinction to be drawn is between the industrial market and the consumer market. The industrial market includes such items as filtering cloth for sugar refineries, tire fabrics, shoe linings, and many others. Consumer goods include sheets, towels, and other household goods, wearing apparel, and other items of personal use. In view of the decline in home sewing, the market for cotton cloth for wearing purposes has been shifting from a consumer market to an industrial market—cutters-up—and presents some particularly perplexing problems."

This distinction, Dr. Copeland pointed out, makes it possible to study the needs of customers—a method of market approach rarely used by cotton manufacturers—and also makes worthwhile specialization in selling, a different crew of salesmen specializing in the different markets. As to advertising textiles, he said:

"There is a place for advertising in the textile field, * * * but there are obviously certain things which it is unreasonable to expect advertising to do. Consumers will judge the desirability of the design and feel of the fabric at the time of purchase and they are not likely to be swayed on these matters by advertising. On the other hand, there are certain qualities in cloth, such as its durability, the fastness of the colors when it is finished, and so on, which cannot be judged by the consumer at the time of purchase and for which a reputation can be developed through advertising, provided the merchandise has the merits claimed for it. In other words, in order to be effective advertising has to be tied in closely with the company's production, merchandise and distribution methods. Properly applied advertising is a sales accelerator, but it cannot do the whole job of marketing, at least in the case of textiles, nor can it of itself correct basically unhealthy conditions."

T. M. Marchant, elected second vice-president . .

Dr. Copeland stressed the difference in imitative merchandising and creative merchandising. He said, "In merchandising style goods there is inevitably a good deal of imitation. Fashion means imitation, but even there imitation is often carried to an unprofitable extent. * * * Each style runs in a cycle. It is first introduced and taken up by well-to-do consumers who make their purchases in a somewhat selected type of establishment. These are the style leaders and promoters. After the style has been accepted it enters into the second stage of the cycle, when it is reproduced in cheaper fabrics and garments and sold in the mass retailing institutions. Presently it reaches a third stage where it is being offered in fabrics and garments of the cheapest quality. Every successful style carries with it the germ of its own destruction. This means that any company operating in style goods should time its exit from the market for a particular fabric before the style has gone too far. The failure to time the exit by observing the number of imitators down the line costs the industry millions of dollars every year.

"In non-style lines if a manufacturer brings out a product which meets with success, it is common practice for other manufacturers to seek to imitate it at once, perhaps shading the quality. The result is that prices are cut to a point where no one makes a profit. It seems to me that this sort of imitative merchandising is one of the many reasons for such widespread existence of excess manufacturing capacity. The frequency with which this imitative merchandising occurs reflects a lack of imagination. In fact, it is not the imitation itself but the lack of creative ability of which it is evidence that seems to me to be particularly serious."

Dr. Copeland turned next to a consideration of some of the problems of the industry. "These troubles," he said, "are partly of your own making and partly the result of influences and conditions outside the industry, to which the industry has found it difficult to adjust itself." He emphasized that this industry was not in a healthy condition prior to October, 1929, and that a recovery in general business conditions will not necessarily rehabilitate the cotton textile business. A fundamental trouble of the industry, he said, is the inability of the mills to adjust themselves to the market situation. "One of the reasons why certain conditions in this industry have become so unsatisfactory is because of the widespread adherence to antiquated points of view by so many men in the business. This is true of the mill men, who cling so tenaciously to traditional practices. It is also true of many of the selling offices; in fact Worth Street, New York City, has been one of the greatest strongholds of tradition that I have ever been permitted humbly to enter. Indeed, until very recently it has required a great deal of courage to brave the scornful disdain of Worth Street in attempting to suggest any major changes in the marketing of textiles."

Dr. Copeland concluded his discussion with reference to some of the factors that have resulted in change of textile merchandising methods, such as the influence of the automobile in shrinking distances and concentrating trading centers, the devel-

opment of chain store methods of buying and distribution, etc. He said: "The concentration of buying power through the growth of chain stores and buying syndicates has added to the demoralization of the price situation in the textile industry. The industry has been price-minded. It is one of your traditions. With excess manufacturing capacity, a price complex, and increasing concentration of buying power of distributors, the industry during the last seven or eight years has been in a seriously vulnerable position—and it has suffered the consequences. The attitude toward costs and inventories has also weakened the industry." Dr. Copeland strongly criticized the figuring of costs upon the basis of 100 per cent operations, and, without enough orders to operate 100 per cent, cutting prices in the hope of securing volume to earn the overhead. He said, "If each mill would adjust its cost methods to figuring on the percentage of capacity which it reasonably could expect its sales to cover at a profit, one of the temptations to ruinous price cutting would be removed. Very likely, furthermore, a frank facing of the facts brought out by such a procedure would lead to the junking of more of our obsolete mills."

Dr. Copeland's able discussion concluded the morning session. The delegates were the guests at luncheon of the Atlanta Clearing House Association, with Robert F. Maddox, chairman of the executive committee of the First National Bank, acting as toastmaster. The ladies attending the convention were at the same time charmingly entertained at luncheon as the Clearing House Association's guests, at the Capital City Club's country club, Brookhaven, the luncheon being followed by a tour of some of Atlanta's beautiful homes and gardens.

Afternoon Session on Jute.

A valuable discussion of the possibilities of using cotton in substitution of jute was conducted on Friday afternoon, under the leadership of R. E. Henry, president of the Dunean Mills, of Greenville. Robert J. Cheatham, of the Bureau of Agricultural Economics, Department of Agriculture, followed Mr. Henry's introduction to the forum with an interesting report on "A Comparison of the Practical Uses of Cotton and Jute". He pointed out that approximately 10 per cent of the jute imports into this country is used for bagging raw cotton, 67 per cent for burlap bags, and small quantities of burlap or wrapping not in the form of bags, and 23 per cent in the form of yarns and twine. He also explained that even with the present low price of cotton, jute is cheaper than cotton on a pound-for-pound basis, but that in many cases, cotton in competition with jute can offer advantages where a lighter weight cotton fabric will serve the purpose, or where the cotton fabric has greater durability or where, as in the case of flour bags, its closer weave will better serve the desired purpose, or where secondary uses can be found for the cotton so that the cost of the cotton fabric on a unit-of-use basis is less than, or at any rate not greater than the cost of the jute product.

Mr. Cheatham reported that, due to the advantages of cotton and the efforts made toward the use of cotton bags, that from approximately 3½ million consumer-sized packages of cotton used in 1930, the use in 1931 increased to over 10 million, or about 300 per cent. As a single illustration of the adaptation of cotton otherwise, he cited the case of a covering for concrete construction. For many years, he said, burlap has been considered a standard covering for curing concrete and most of the southern states have named burlap in their specifications as the covering to be used in public construction projects. The purpose of a cover during concrete construction is to retain moisture in the concrete until a curing action has taken place. To determine the feasibility of using cotton for this purpose, an experiment was set up, with the co-operation of a leading southern contractor, to test cotton cloths under actual working conditions. Osnaburg was first tried but it was soon found not to be sufficiently absorbent. Experiments were then made with a number of different constructions of cotton cloth until one was found which would retain approximately as much moisture and for as long a time as sheets made from burlap. These cotton sheets, although slightly higher in first cost, were found to be about 50 per cent cheaper per mile of road than the burlap sheets commonly used.

There was a very free discussion following Mr. Cheatham's paper. Stuart W. Cramer said that a year ago he had opposed a request for a tariff on jute, for at that time there seemed to be no cotton fabrics available which might replace it, but that now he would endorse such a stand inasmuch as apparently such cotton fabrics are available. George M. Wright, T. M. Marchant, Harry L. Bailey, E. Kent Swift, David Clark, Charles A. Cannon, J. R. Killian, J. H. Cheatham and others joined in the discussion. The result was a decision to recommend to the resolutions committee a re-affirming of the Association's previous request for an adequate tariff on jute and jute products, and a recommendation that the Association's national committee be empowered to secure and disseminate the facts of the situation and to expend for this purpose the necessary funds consistent with the amount available. This suggestion was carried out in the unanimous adoption of such a resolution at the Saturday morning session.

Annual Banquet and Dance.

The third session of the meeting was a delightful banquet and dance on Friday evening, held at the Piedmont Driving Club. A precedent was established on this occasion in that, for the first time, the ladies joined with the delegates in participation at the banquet, and later enjoyed a dance. A gracious act on the part of President Callaway was to provide each lady present with an orchid bouquet. Following the banquet, George A. Sloan, president of the Cotton-Textile Institute, was a featured speaker, discussing the subject "Going After Business" and touching appropriately upon the subject of National Cotton Week, giving facts and figures indicating conclusively the success with which this enterprise had been put over again this year. The other speak-

(Continued on page 89.)

The Improved Automatic Spooler and "Super-speed" Warper

THROUGH the courtesy of the Avondale Mills, a description is presented here of the installation in their Bevelle plant of the improved design of automatic spooling and high speed warping. The chief features are increased warping speed by warping from stationary cheeses, over-end; and increased production per spooler unit . . . .

MATERIAL improvements have recently been made in the Barber-Colman system of warp preparation, affecting both the automatic spooler and the high speed warper, which result in higher efficiency and improved product at a considerably higher speed on the warper.

This method of warp preparation, as is generally known, was introduced some eleven years ago, and represented at the time the first revolutionary change in years in this department of the mill. The recent improvements in the spooler and warper were adopted following an extended period of exhaustive test and experiment; and involve a number of features of re-design and change in method which radically change the principle, and others which are refinements in established methods.

A number of installations of the new equipment have been made in southern mills. One of these is at the Bevelle plant of the Avondale Mills, in Alexander City, Ala., where three automatic spoolers and three "Super-speed" warpers were installed. Inasmuch as the changes made in the system represent fundamental improvements in an established textile process, a recent opportunity to inspect and describe the Bevelle installation was readily accepted.

Fig. 1. General view of new warp preparation equipment at Bevelle plant of Avondale Mills; automatic spoolers in foreground and "Super-speed" warpers in the background.

Photos by James Huntington.

Textile men are generally familiar with the original Barber-Colman system, consisting of the automatic spooler and high speed warper. Under this system, the yarn is drawn off of the bobbin and wound automatically onto a cheese instead of a spool; the process being accomplished by the highly-mechanized spooler which automatically finds the end of yarn on the cheese being made, and by means of a traveler head traveling around the machine automatically ties, with a weaver's knot, the end of the new bobbin on and automatically continues the winding of the yarn. Prior to the new developments, a "trident" carrying 12 of the cheeses was placed in the warper creel. These cheeses were wound on ball-bearing cheese cores which were taken off complete from the spooler spindles, and then were unwound by rotation in the warper creel, an electric brake acting against the surface of the cheese to stop its rotation upon stoppage of the warper.

Improvements on the Spooler.

Outside of natural refinements in construction, etc., there has been made only one fundamental change in the operation of the automatic spooler, the general principle of the machine being retained. This improvement consists in a re-design of the tying mechanism so that it can be operated at much higher speed. On the previous machines this mechanism was operated at a speed sufficient to tie up the bobbins which two operators could put in place for it. The knot-tying mechanism in the traveler head has been re-designed to permit a speed of 90 knots per minute, which makes it possible for it to tie up the bobbins put in place by three operators. This of course makes it possible to use a longer machine—the spoolers at Bevelle carrying 180 spindles each—and results in a greater poundage production, with less machines being required for handling a given production.

Another change made on the spooler, which resulted from a re-design of the warper, is the elimination of the self-contained ball-bearing cheese core on which the cheese was formerly wound and which

was removed from the spooler with the full cheese on it and revolved on its own bearing in the warper creel. In the new principle, a ball-bearing journal remains on the spindle, and on this is slipped a Bakelite cheese sleeve, carrying the starter yarn, on which the cheese is built. When the cheese is full, the operator takes this sleeve carrying the yarn off of the ball-bearing spindle, and places on the spindle another sleeve containing the "starter" yarn. This new design, illustrating the grooved sleeve and ball retainer on the spindle, is shown in Fig. 2.

Instead of tridents, a transfer holder with three uprights, each carrying six cheeses, is used for transferring the cheeses from the spooler to the warper creel. As the full cheeses are doffed from the spooler, the operator places them on the uprights of the holder, which sits on her truck; she then takes

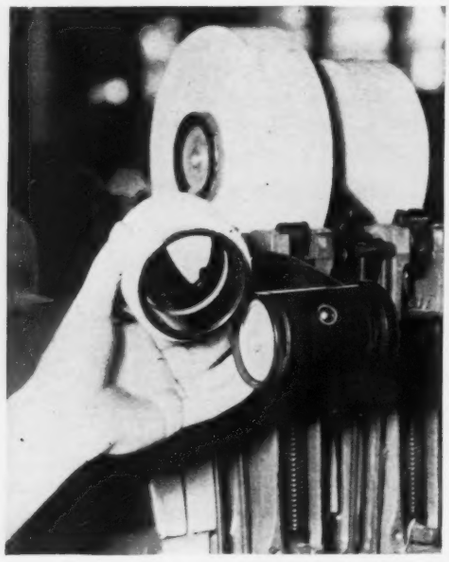


Fig. 2. Showing new cheese core with groove which slips over ball retainer in bearing on spooler spindle and on which cheese is taken to warper. . . . . .

the holders off of the truck and puts them on a roller conveyor from which they are taken by the creel hand.

Warping at 900 Yards a Minute from Stationary Packages.

The most outstanding and obvious change in the construction of the high speed warper, now called the "Super-speed" warper, is the substitution of an entirely new creel. Instead of rotating cheeses, in the new system the grooved Bakelite sleeve carrying the cheese of yarn is slipped over a detent holder in a metal guard. The package remains stationary in this holder and the yarn is pulled off over the end of the cheese. This eliminates the momentum previously attendant upon the rotating cheese, and, with a complete re-design of the warper itself, permits a speed of 900 yards a minute as compared with 500 yards a minute on the previous Barber-Colman warper.

The construction of the creel itself is unusual and interesting. The metal boxes or cheese receptacles are mounted in vertical rows of nine containers each, and a series of these rows of containers is connected to an endless sprocket chain. The sketch in Fig. 4 is used to illustrate the principle of the new creel. While the warper is taking yarn from

Fig. 3. The creel hand is shown re-filling the creel from the inside; at the same time the beam is being made from a full set of cheeses on the opposite sides of the creel wings. The construction of the cheese holders is clearly seen. The creeler completes her work before the current beam is made; then a motor turns the creel around, putting the fresh set on the outside for threading up, and the used set on the inside for creeling . . . . . .

the cheese in the receptacles on the outside of the creel, the creel girls re-load the inside of the creel with full cheeses for the succeeding beams. When the beam from the first set of cheeses on the outside of the creel is made, the operator starts a small motor which automatically reverses the position of the sets of cheeses. The creel is turned one-half of a revolution, which throws the fresh set of full cheeses to the outside of the creel, and the used cheeses to the inside.

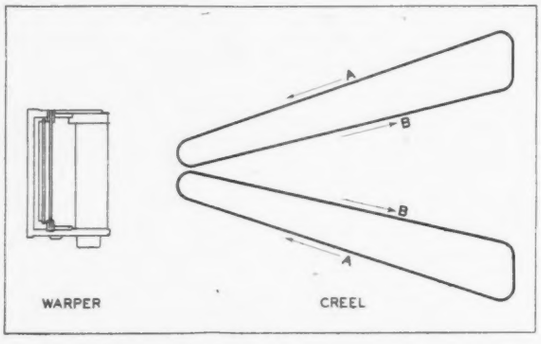


Fig. 4. This schematic plan view of the warper and creel is used to illustrate the principle. While yarn is being taken by the warper from cheeses on the outside of the creel wings, marked A, the creel hand (see Fig. 3) is re-filling the other side of the creel, B. When a beam is made, a motor turns the creel one-half revolution, in the direction of the arrows, and this throws the freshly creeled set to the outside, where it is threaded up; meanwhile the creel hand re-fills the set of containers thus placed on the inside of the creel, B . . .

The photograph in Fig. 3 illustrates clearly how the creeling of the warper is accomplished. The creel hand, starting at the bottom of the vertical row of nine cheese holders, takes out the used cheeses and replaces them with full cheeses. When the row of nine is filled, she draws the ends of the nine cheeses down to the bottom of the creel, and wraps them together.

It will thus be seen that there is no time lost in the actual creeling of new supply packages in the warper creel. Just as soon as the creel is turned "inside out", so to speak, at the completion of a warp, and the nearly-emptied packages are turned to the inside of the creel, the creel hand immediately begins placing fresh packages of yarn in the creels, and as soon as the full packages on the outside of the creel are threaded up, the warper is started into production on the new warp. The creel hand can easily complete the creeling of the new section during the running of the warp, so that the only time lost from production is the time necessary for turning the creel and threading up the new ends.

The mechanism of the warper has been greatly simplified. With stationary supply packages, no brake is necessary on the cheeses, and also the resetting mechanism formerly located on the creel has been eliminated.

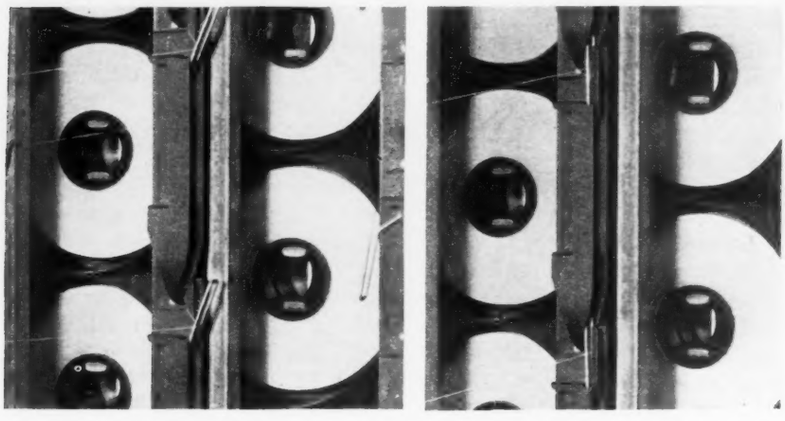


Fig. 5. At left, detail showing drop wires and tension bar in "stopped" position, in which a slight drag is placed on yarn to prevent kinking. At right, drop wires and tension bar in operating position. The line of travel of yarn through drop wire is directly over the center of the cheese, the photo having been made at an angle . . . . . .

The method of threading up the warper is interesting. When the full cheeses have been moved around into operating position, the warper hand picks up the nine ends of each vertical row of cheeses, which, as explained, have been previously carried to the bottom of the row and wrapped together. The operator lifts these ends and carries them to the warper comb. The drop wire on each thread, located in front of each strand, is so constructed that each end automatically threads itself in its drop wire as the group of threads is raised by the warper tender, there being no eyes through which the ends must be threaded. Close-up views of the drop wires, in stopped and operating position, are shown in Fig. 5.

Between the cheese and the drop wire in the warper creel is located a tension bar, which is suspended from a crank motion at the top of the creel and lies directly behind the drop wire. In threading up, when picking up the nine ends wrapped together at the bottom of the row, the operator moves this tension bar slightly, so that the ends pass under it, and the ends thread themselves in the drop wires. As will be seen in the illustration showing the drop wire and tension bar in operating position, there is no tension at all placed on the yarn while it is being drawn off of the cheeses at the high speed at which the warper runs. As the warper starts up, and as it stops, a crank motion moves the tension bar in, and a slight but sufficient amount of crimp or drag is placed on the yarn between the tension bar and the drop wire, by the action of the finger of the drop wire and the tension bar, to prevent its slackening upon stopping or kinking upon starting up. As the warper comes up to speed the tension bar swings out of the line of the yarn, the finger of the drop wire moves up into operating position, and there is no tension on it other than that necessary in its turning to go to the comb. Of course, in the event of a broken end, the drop wire finger falls, stopping the entire machine.

A convenient arrangement for assisting the operator to readily find a broken end is provided by having each section of the comb divided into nine sections, each numbered to correspond with the vertical rows of cheeses in the creel. A missing end is readily identified as being in any certain dent in any numbered section of the comb, and by going to the correspondingly numbered row in the creel, and counting up from the bottom of the row to the proper number cheese, the missing end is readily located.

After passing through the drop wire, the yarn then passes only through the warper guiding comb over a revolving roll and onto the beam.

Other than re-designing for refinement and more sturdiness to permit the higher speed of 900 yards per minute, the head of the warper is essentially the same as previously. It is provided with a larger multiple disk clutch and brake, on account of the higher speed, and also has the anti-bounder let-off motion for guaranteeing evenly wound beams. Visible dial reading is also provided, and the warper is equipped with a pipe safety guard in front of the beam.

The re-design of the tying mechanism on the automatic spooler, permitting an increase in the number of knots tied per minute, obviously results in a greater capacity of the traveler head and therefore permits, as has been mentioned, the use of longer machines, or a larger number of spindles per machine; and the addition of one operator to each machine. In the Bevelle installation, as stated, each of

the three spoolers contains 180 spindles, and three operators are used on each machine. Each of two operators handles slightly more than half of the spindles on a side, the third operator going around the end of the machine to take care of the remaining spindles on each side. The two "side" hands do all of the doffing of full cheeses, and the "end" operator assorts the bobbins which are thrown out at the end of the machine on account of carding and spinning defects.

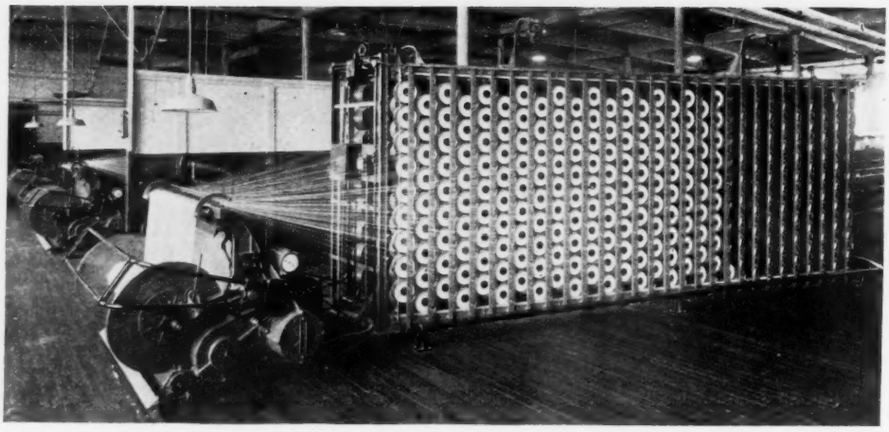


Fig. 6. The battery of "Super-speed" warpers. Note new creel.

These operators handle practically as many spindles as those on the shorter machines, so that there is no increase in labor cost, but a decreased machinery installation (in number of machines) for handling a given poundage of yarn.

It may not be amiss here, though it is not pertinent to the new design, to discuss the fundamental principle of the spooler. As is generally known, the operative has no part in the actual tying of the yarn ends, her duty consisting entirely of providing the machine with supply packages of spinning bobbins, and of removing the completed packages or cheeses from the spindles. All of the work of winding and tying is almost completely mechanical. This fact, it is pointed out, in conjunction with the yarn cleaning and inspection provided by the mechanism of the spooler, effects an improvement in the quality of the yarn in the warp preparation department; the warper largely preserving the quality of the yarn.

It is apparent that one advantage derived on the warper by the use of the new type of creel, as described, is that of flexibility. It will be understood that when a beam is finished, and the creel turned around to put the new cheeses into position, that no time has been lost from production in replacing the used cheeses with full cheeses; and that, furthermore, it is no more difficult and requires no more time, to supply the creel with an entirely different number or color of yarn, or warp pattern, than to fill it with the same kind of yarn being run off of the other side of the creel while the creeling in is being done. When a beam is finished, the yarn left on the cheeses is all broken out, and an entirely new set of cheeses replaces it.

The elimination of practically all guides and drop wires, other than those described, is another feature of the warper in regard to the reduction of tension or friction on the yarn. Since practically no tension is applied such resistance as is encountered by the yarn in its travel from the cheese to the beam is almost entirely that of air friction or "windage".

It is now in order to discuss the results effected at the Bevelle plant in Alexander City, through the installation of the system. In doing this, information supplied by James L. Byers, superintendent of the Bevelle plant, will be presented. This plant makes a range of warp numbers in the coarse range —6s, 8s, 11s, 15s, 16.25s, and 18s, the bulk of the production being on 15s and 18s. Before the installation of the new equipment, 12 slow speed warpers running at 55 yards a minute, and 2 high speed warpers with magazine creels, and 6 old style spoolers and 3 cone winders were used. These 14 warpers required 4 warper hands and 6 creel hands, and 18 spooler hands and 9 winder hands were used; there were in addition 6 men for pouring up yarn and doffing warpers, 1 section man and 1 sweeper.

The present installation comprises three 180-spindle automatic spoolers, and three "Super-speed" warpers. On the spoolers, 9 spooler hands are used, and on the warpers, 2 warper tenders, and 3 creel hands; with 4 men who doff the warpers, and also do cleaning and handling of yarn, one section man and one sweeper. Thus the labor complement has been reduced from 45 operatives to 20 operatives.

An obvious reduction in kinks, spooler knots, gouts, etc., as a result of the work of the automatic spooler, which caused a notable increase in efficiency in weaving, is among the chief features to which Mr. Byers pointed as a result of the new equipment. In addition, the removal of tension on the yarn on the warper resulted in a retention of the original elasticity in the yarn.

As a specific illustration of increased weave room efficiency, Mr. Byers cited the loom assignment on a 54-inch, 1.30-yard, 96x64, 5-harness sateen construction, with 5,184 warp ends. Previously, a weaver, with battery hand, operated 16 looms on this construction. Since the installation of the automatic spooler and "Super-speed" warper, the weavers are now handling 32 looms, with battery hand, on this construction. On a 37-inch, 2.00-yard, 86x42, 3-harness twill, 3,212 warp ends, weavers filling their own batteries were running 14 looms. Now, with battery hands, they operate 44 looms each. The floor space effected through the higher production and efficiency of the new units, amounted roughly to 50 per cent.

Mr. Byers also reported that the production of beams carrying even tension on all of the ends resulted in a material decrease of soft waste back of the slashers, and that this even tension, together with the retaining of the elasticity in the yarn, made a noticeable improvement in the "face" of the woven cloth, especially on the twills.

New Division of S. T. A. Holds Good Discussion at Greensboro

Reported by Robert W. Philip

A GENERAL discussion of subjects ranging from opening to weaving was held at the first meeting of the new North Carolina-Virginia division of the Southern Textile Association, reported here.

Neps in card sliver, straight wire clothing, card and drawing trumpet sizes, automatic roving tester, break draft, stretch on slashers, warps sticking to slasher cylinders, rainbow or curved cloth—these are among the subjects covered . . . . . .

THE initial discussion meeting of the newly formed North Carolina and Virginia Division of the Southern Textile Association was held at the King Cotton Hotel in Greensboro, N. C., on Friday, May 6th. The formation of this division is the latest step in the association's plan of dividing the organization up geographically into smaller groups. During the meeting an interesting discussion covering a wide range of mill subjects was held.

At the beginning of the meeting, Culver Batson, manager and superintendent, Consolidated Textile Corporation, Lynchburg, Va., who had been serving as temporary chairman, was elected permanent chairman of this division, and presided at the meeting. S. T. Anderson, assistant superintendent, Draper American Mills, Draper, N. C., was made vice-chairman; and J. O. Thomas, personnel director, Carolina Cotton and Woolen Mills, Spray, N. C., was elected secretary and treasurer.

After brief talks by President T. W. Mullen and Secretary Walter C. Taylor of the association, Mr. Batson took up the practical discussion which was based on a questionnaire that had been prepared by the organization committee.

Causes of Neps.

The first question discussed was, "Are you troubled with neps, and if so, what are you doing to eliminate them?"

Mr. Fisher was first called on. He said that about the most common cause of neps which he had found was overloaded cards, or dull and faced cards. He said, "The best thing to do is to keep the cards sharp and grind them at least every four weeks, and set them up as close as possible and card as light as possible."

M. R. Vick, overseer carding, Rosemary Manufacturing Company, Rosemary, N. C., said that of course if a card is overloaded or the clothing is faced, neps will be made; but that most of the neps that he has seen have come from having a card overground. "If you are making neps all of the way across, and will examine the wire points with a knife, you will find a little hook. It used to be said that you could not hook a steel wire, but it can be done, and when this is true the only thing you can do is to burnish that wire and grind it lightly for two or three hours, and I think that will help to eliminate neps. If you are getting neps half way across the card, then that is due to faced clothing as a card rarely faces all the way across."

The chairman asked whether neps could be caused back of the card—meaning in previous processes.

"I agree with the gentleman who just spoke," said L. R. Coggins, "provided the cards are sharp and the clothing in good condition and on tight, and the licker-in is in good shape, and he is not carding too much, he should not have very many neps. I think it is all important to have the cards sharp and well set, in keeping with the class of work being run."

J. V. McCombs said that one time he was called into a New England mill which was having considerable trouble with neps in their sliver. He explained that at that time in the New England mills, the card room and the picker room were operated by separate overseers, and that the overseer of the card room had his cards in good shape, but that he was being blamed for the neps. "I went back and found that they were being made on the pickers," said Mr. McCombs. "A nep made on a card is very different from that made on a picker. If a card is making bad work, it will turn loose into the sliver a little long string, and I think the majority of the neps are made in the picker room, especially where the Kirschner beater is used. It is easy to tell whether your Kirschner beater is making neps; give the beater one turn of the pulley by hand and you can see it. There is no such thing as setting a carding beater too close, and if you do not get it up close you are going to make neps. I have been bothered very little with neps on cards. Long staple cotton has more neps than American cotton, especially on combed stock. Lots of times we have neps on combed stock because a fellow lets his brushes on the comber wear off too short, and doesn't set them up, and the brush does not keep the half laps clean, which puts the neps right back into the work."

"It is true that you can make neps on the pickers, but in that case, then all of your cards would show up the neps," said Mr. Vick. In answer to a question from Mr. Mullen, the opinion was expressed that it is not easy to make neps with a blade beater.

L. V. Andrews, superintendent, Martinsville (Va.) Cotton Mills, was called upon. He said that "you can make them with a blade beater if the blade

is set too far off."

Mr. McCombs pointed out that it is possible to put the cotton in such a condition in the opening as to cause neps; "if the cotton is badly curled, then you have a bad proposition to eliminate the neps," he said.

"I think lots of the neps are made on pickers," said Mr. Andrews. "They are in the cotton, especially waste stock. If you will take the cotton and examine it you will find little hard particles in it and when they run through the picker and onto the card very often they are made up into many neps, especially where you are running the carding beater.

"Another place is by setting the grid bars too close on the pickers. I have gone to the extreme of taking out the screen bar on the picker to eliminate them, and they can be taken out on the picker by

CULVER BATSON, manager and superintendent, Consolidated Textile Corp., Lynchburg, Va., chairman of the new division . . . . .

doing that. We know that we have these neps in cotton, and the thing we must do is to do the very best we can to eliminate them. If our pickers are set properly, and the neps go to the cards, we must do what we can there to eliminate them. I have made some very extensive tests on new card clothing and I think that many of us have card clothing that is entirely too old. You can take a clothing that is worn down and set up another card just in front of it with new clothing and new flats, and this worn clothing will fill up a good deal quicker, and you will have a good many more neps at stripping time than on the new one.

"Very often superintendents and overseers get in the habit of grinding the cards around-and-around. We will grind this particular card today and maybe it will not be ground for four weeks. We just take it for granted that when we grind we will grind it again.

"We have a system by which the overseer and card grinder inspect the cards every Saturday, and by doing this you can very readily detect when clothing is dull. If you eliminate the neps on one card you have gone a long ways toward eliminating them in the sliver.

"Another thing we do is to take down the doors on the back of the cards every Saturday and clean out the fly, and take a broom and clean out the openings of the screens. They get terribly filled up, and we fix them so the fly will drop out. Another thing is to watch the strips, especially with the old type of stripping system. We have found that our rollers get worn on the ends, and the cards fill up quicker on the end of the web than anywhere else. I have had some experience on filling sateens, and on that work you must get it as free from neps as possible."

Mr. Mullen asked for experiences on neps with bleached raw stock. J. R. Wilson of Ramseur, N. C., said that, "My experience has been if you will properly treat the bleached raw stock and wash it, you will have fewer neps than when using unbleached cotton."

David Clark of Charlotte brought out that at the carders' meeting in Columbia it had been endeavored to define just what a nep is, and that the conclusion was that it is a cotton fiber that is rolled up.

Mr. McCombs asked whether Mr. Andrews had ever seen neps show up on the slasher cylinders. He pointed out that there is a difference between a rolled-up fiber and a nep made on a card and one made on a picker. "We call a nep that little long thing that is prominent on the end of the staple of the cotton," he said.

Mr. Batson pointed out that some of the neps undoubtedly came from the cotton, some from rolling in the opening, and some from rolling in the card.

Mr. Coggins emphasized that close settings on the card are very essential in eliminating neps, and the more regularly they are stripped, the better it is. He pointed out that some mills may not adhere as carefully to their stripping schedules as they should, and also that different grades of cotton being run require different stripping frequency. Another thing, he said, is having the comb to the doffer set at the proper point, so that it will not comb the neps into the work off of the doffer.

J. W. O'Neill said that he had tried the experiment of slowing down the cylinder speeds to reduce neps but that he could not tell any difference. Mr. McCombs said that he had never tried slowing down the cylinder in order to eliminate neps, but that at one time he had gone into a mill which was changing from American average staple cotton to 1 1/16-inch Mississippi benders, and that the card cylinder speed was 148 r.p.m., and that he could not card the cotton at all until he went up to 168 r.p.m. on the cylinder, and he added that he believed he could do better carding at 168 to 170 r.p.m. on the cylinder than at a lower speed.

Straight Wire and Metallic Card Clothing.

Discussion of experiences with straight wire and metallic card clothing, with particular reference to neps, was next requested. S. T. Anderson said, "We have one card equipped with metallic clothing and we might get a few more neps, but it is mighty little if any more. We think it is pretty good. We would like to buy some more. I agree with what Mr. Andrews said about a card with short card clothing on it. In regard to straight wire, we know we do get a great many more neps with this. We have six cards clothed with the straight wire, but the metallic clothing is pretty good."

"If you strip the straight wire along with the others," said Mr. Andrews, "still it looks like it fills up a little quicker. It might be, however, that we ex-

pect too much from it, but now we are stripping it right along with the other cards."

"We started stripping straight wire once a week," said Mr. Fisher, "but now we are stripping it twice a day. We strip with a regular stripping roll, and the way the wire sits, it takes the point off of it, and it will not stay sharp." Mr. Anderson said that he strips with a vacuum stripper.

The chairman asked Mr. Anderson if he had had any trouble with faced wire on the metallic clothing, and the reply was that there was a little trouble of this kind at first, but that the manufacturer came back and ground the clothing and that it has been working fine ever since.

Diameter of Card and Drawing Trumpets.

The chairman next asked as to what effect a difference in the size of trumpets on cards and drawings has on the card sliver and yarn.

"I have never paid much attention to my card trumpets, or my first line drawing trumpets," said Mr. Vick, "but I like to keep my finisher drawing trumpets very close to the same size." He explained that if the drawing frame hand knows that the trumpets will break out with bad work coming through, that he will keep his clearers clean. He and Mr. Ripple said that the trumpets should be fitted to the size of sliver being run.

Mr. Batson said that he had once worked for an old overseer who had run railway heads and that he was very particular to gauge his trumpets, as he believed that the size of the trumpet had as much effect on variation of the yarn as anything else in the mill, and "he impressed on me the importance of the trumpets not only on the drawing but on the card as well and on the first drawing also, and it has been our experience that a lot depends on the uniformity of the diameter of the trumpets. Our carder and section men have gauges and make regular rounds to check the size of the holes ever so often. I think they save a lot of trouble by keeping these trumpets uniform."

Mr. Andrews told of an experience, in checking up on the card trumpets, of finding the variation from 5/32-inch to ¼-inch on the cards, and expressed the belief that if it is good to have the finisher drawing trumpets right then it is also a good idea to have the cards and first drawing trumpets right. He pointed out that "if you have the proper size of trumpet on the front of the cards, that a doubling of the laps will not go through. We think it is very important to watch the trumpets, and since changing them our sliver heavied up about one grain and the drawing does not break back as bad, and our weights and our numbers are a good deal evener." He said that he uses a 5/32-inch trumpet on the card for a 48-grain sliver.

"The biggest damage I can see from uneven sizes of trumpet is in the size of the sliver," said Mr. Ripple. "I contend if the trumpets are not uniform in size that you will not get the same size of sliver." Mr. Whitehead said that his sliver heavied up when he made the hole in the trumpet larger, and Mr. Coggins said that he had just the reverse experience; that when they changed to a smaller trumpet, the sliver became heavier and they had to change the draft gear. He said that the smaller trumpet condensed the sliver more and made it heavier. Mr. McCombs told of an experience in changing a mill from a 60 or 65-grain sliver to a 38 to 40-grain sliver and that in doing this he had difficulty in getting the work through the drawing, but that he found his trouble in the calender rolls. He built these up and took them to a lathe and turned them back down to the original size and got much better results. He declared that it is important for any mill to replace old and worn trumpets.

It was also brought out that it is important to consider the class of cotton in connection with drawing frame and card trumpets; that on one grade of cotton it might be necessary to run a different size hole to that used on another grade of cotton.

R. E. Lindsay of Saco-Lowell Shops was called upon to discuss this question and offered as a matter of interest the accompanying table of sizes of holes and drills to use on different grains of sliver. He pointed out that this was not an arbitrary list of sizes, but must be used as a bench mark and altered in accordance with local conditions. The table follows:

Approximate Size of Hole in Trumpet and Number of Drill to Use for Different Weight of Sliver.

Card					Drawing				
40 Gr.	.140"	dia.	hole	No. 27 drill	40 Gr.	.113"	dia.	hole	No. 33 drill
45 "	.150"	"	"	No. 25 "	45 "	.120"	"	"	No. 31 "
50 "	.160"	"	"	No. 21 "	50 "	.125"	"	"	No. 30 "
55 "	.167"	"	"	No. 19 "	55 "	.132"	"	"	No. 29 "
60 "	.175"	"	"	No. 16 "	60 "	.140"	"	"	No. 28 "
65 "	.182"	"	"	No. 14 "	65 "	.145"	"	"	No. 27 "
70 "	.190"	"	"	No. 12 "	70 "	.150"	"	"	No. 25 "
75 "	.195"	"	"	No. 9 "	75 "	.155"	"	"	No. 23 "
80 "	.205"	"	"	No. 6 "	80 "	.160"	"	"	No. 20 "

As this table is necessarily only approximate, allowance should be made for the quality cotton and the conditions under which it is worked.

Automatic Roving Tester.

Mr. Batson next asked for experience with the automatic roving tester. No mill men present discussed this. Mr. Lindsay said that his shops think quite a good deal of this, and that they have themselves brought out a tester for card sliver and roving up to 1.50-hank. William Lee as southern representative of the Belger Company, manufacturers of the automatic roving tester, volunteered a description of it, pointing out that at one time the industry had no method of testing the breaking strength of yarn and that testing equipment had been devised for this purpose; and that the automatic roving tester eliminates the guess work as to the amount of twist to be inserted in roving by indicating just when there is too much or insufficient twist in the roving. He pointed out that in connection with tension on fly frames, that if bobbins built to the blueprints of the manufacturers are used there is comparatively little trouble, but when other bobbins are used, the cones on the roving frame are not "elastic" enough to make allowances for a variation in the

bobbins; and that the calculations by which twist multiples are usually arrived at are based on the fact that the strand is round, but that when it is put on the bobbin it is flattened out. He explained that the roving tester by making charts of the twist in roving shows up any discrepancies in twist, tension, etc.

In connection with this instrument, Mr. Batson expressed himself as being convinced that the time has come when we must put in the same amount of thought in our work that the chemist would use in making up chemical formulas, etc.

Effect of "Break Draft" on Yarn Strength and Evenness.

The next question was, "What effect does the break draft have on the breaking strength and evenness of yarn in spinning?"

Mr. McCombs expressed the opinion that on short drafts, that is from about 9 to 11, the break draft has no effect at all on the breaking strength, but that when the draft of the frame is increased up to 18 or 19, it is necessary to increase the break draft also. He told of a mill that went from single roving, on ordinary spinning, to a draft of about 18, and changed the break draft from 1.10 to 1.25, and showed an increase in breaking strength on 30s of around 2 or 3 pounds.

WALTER C. TAYLOR, secretary-treasurer of the Southern Textile Association, and The Arkwrights, Inc. . . . .

Mr. Coggins asked why break draft is used; are the fibers broken up or are they stretched in that distance? Mr. Lindsay stated that "it has been my understanding that break draft is to break the twist out of the roving. Years ago we used to have two teeth difference in the break draft on the spinning and some eight years ago they made it five teeth, that is 1.05 or 1.06, and the reason was that the shops had been experimenting on this and thought that it not only keeps the ends from running out at the sides of the rolls but they thought it gave a good deal evener yarn because it broke the twist. The break draft helps the breaking strength because it gives an evener yarn. On long draft spinning it is 1.31 and it must be better than the short draft or the machinery builders would not be putting out this long break draft."

The next question asked why the setting of the back and middle roll spinning frames is made stationary, but there was no conclusive discussion on this. The next inquiry on the questionnaire was as to whether it is cheaper for a mill to make its own repair parts. Mr. Mehaffey of Lynchburg pointed out that this all depends on conditions at the plant. Mr. McCombs told of taking over a mill of 2,000 looms which had a rather extensive force of mechanics, and that by eliminating the manufacturing of repair parts at the plant, he had been able to reduce his repair bill by 42 per cent. He said that with automatic gear cutting machines, etc., he felt that it would be foolish for a large mill not to make its own gears, but that when it came to repair parts he felt that it was more economical to purchase these than to attempt to manufacture them.

Stretch on Slashers.

"How much stretch do you have on slashers, and what is the effect of this stretch?" was the next question. E. F. Short, overseer of weaving, Consolidated Textile Corporation, Lynchburg, replied that, "We have some stretch all right, but we try to hold our stretch down below one per cent, on our numbers. It will average .51 of a per cent except when the set is very nearly out. Sometimes, due to a lopsided section beam, or other cause, you must weight them a little more than you should and this will cause you to put in an excessive amount of stretch. In my experience there is very little difference in the stretch on a 10-beam and a 4-beam set; the more yarn you have the more ends there are to help pull the beam around. "The effect of stretch will show up in the cloth, too much stretch will affect the tensile strength of the cloth."

Mr. Short pointed out that there are two methods of determining the stretch, the most accurate one being to figure the stretch from the circumference of the copper roll in the size box multiplied by the speed and then the circumference of the delivery roll multiplied by the speed, the difference being the stretch. He said that he had found that by using a yardage counter he could get a very good test, by counting the yards run onto the section beam in a given time and then taking it to the loom beam in front and getting the number of yards delivered in, say, three minutes, the difference in the yards delivered off of the section beams and the yards put on the loom beam being the stretch. Mr. Short said that his experience is that there is less stretch on an old type slasher than on a positive driven one, his explanation being that up to the present time, the gears which he at least had been able to secure for the positive driven slashers were not correct and that there would be more stretch behind the cylinder with a slackness in front of the cylinder. This discussion concluded the morning session and it was decided to have an afternoon session following luncheon.

Causes of Warps Sticking to Slasher Cylinders.

There was a short session following luncheon, at which the first question was "What causes yarn to stick to slasher cylinders?" Mr. Bradford stated that about the only time he had encountered this difficulty was when he found a bad blanket on the slasher. L. B. Crouch said that it is generally due to a lack of softener in the sizing, and that the remedy is to put more oil or softener in the sizing compound. He referred to experience with coarse, heavy yarn.

"I wouldn't attempt to say what all the causes of warps sticking to slasher cylinders are," said Mr. Short, "but there are a number of things that will do it. The fact that you do not cook the size properly is likely to cause the yarn to stick, and if you run a high percentage of moisture, which most of us like to do, it may cause it. Possibly you have been in the habit of using a certain number of pounds of steam on the gauge and you decide you do not have enough moisture in the yarn and you go ahead and try to get more moisture there, the yarn will be inclined to stick to the cylinder unless you put in a little more lubricant or grease. I had a case once where one of the fans that was carrying the vapor off from the hood was not running and this vapor settled on the yarn and naturally caused more moisture on the yarn and that also caused the yarn to stick. Mr. McCombs mentioned a thing this morning that possibly may have something to do with the yarn sticking to the cylinders (referring to neps). Sometimes the yarn will stick and you do not see anything except that the yarn is wanting to hang to the cylinders and you will have your cylinders covered with some kind of neps. I do not know whether this is due to the yarn not being properly cleaned, but I remember we had quite a lot of trouble with sticking on the cylinders, and the cylinders all looked like they had been covered with wheat bran. At other times yarn will stick when you do not have anything except the yarn clinging to the cylinders and I am inclined to believe that there is something in the cotton not being properly matured or properly cleaned that will cause the yarn to stick."

Mr. Andrews asked whether anyone had tried tapioca starch or flour and Mr. Crouch said that he had tried it and the results were practically the same as those he got with the corn, there being no more sticking to the cylinders with the tapioca. Mr. Andrews asked whether anyone could tell anything on the use of pure wheat flour. Mr. McCombs said that he had nothing on this, but that the best preventive he knew of for stopping warps from sticking is to put in a pint of kerosene for cleaning the cylinders.

G. C. Truslow of Draper, N. C., brought out the point that water remaining in the cylinder, not being properly drained off, would make a difference in the surface temperature of the cylinder and cause yarn to stick. Mr. McCombs told of an experience of going into a mill where he found the size man putting water in the kettle hot and then throwing the starch in there and having it congeal. He said he prefers to put the water in just lukewarm and then put the starch in first and let the water come up to a boil and then after that put in the compound and cook for one hour and thirty minutes. On the size vat, he put a regulator and cooked the size at 208 degrees, and then put a control on his cylinders which holds the temperature at 165 degrees. He said that this had reduced his sticking materially. Mr. Short added that he likes to put his starch in cold water and agitate with the paddle for 15 minutes before cooking.

The next question asked, "How do you stop rainbow cloth, on wide goods?" Mr. Short said that there is no way to prevent it, but that it can be helped somewhat. He explained that the cause of rainbow or curved cloth is weaving the cloth narrower than the loom is built for, causing too wide a spread in the reed, from the beam and harness. Then, again, he said that the cloth roll stands might get worn and not fit against the sand roll. He said that one suggested remedy was to use a heavy crimp bar back of the whip rolls.

Mr. Mullen said that they had been bothered with rainbow or bowed cloth on wide goods, and that they had not been able to remedy it in the weaving, but that by using a "bellied" roll on the finishing machine it had been corrected somewhat.

The causes of loop filling were next asked for and Mr. Short said that in his opinion this is due to the use of too short a taper on the filling bobbins, so that when the filling bobbin was full it would pull off and loop and throw the loop into the cloth.

Whether to give the entire responsibility of oiling and lubricating the mill machinery to the master mechanic was next brought up and it was unanimously agreed that it is much better to leave the lubrication of the machinery under the responsibility of the overseer of the department, though many mills make the practice of holding the master mechanic responsible for the lubrication of the line shafting, motors, etc.

The matter of reducing accidents in the plant was next taken up and Mr. Mullen explained that his mills have a workman committee composed of overseers which make weekly inspections of their three plants and report to the safety committee any recommendations for changes, etc. He stated that this works out very successfully.

The matter of types of cooling systems for drinking water was next brought up. Mr. Mullen reported the use of individual cooling units which he said are less expensive to operate and work out very satisfactorily.

Mr. McCombs asked whether in changing from white stock to colored stock, it is necessary to make any changes in the cleaning and opening machinery. Mr. Vick replied that he had had this experience and that he always finds it necessary to close up the Kirschner beater on the colored stock, or else it will come through too heavy. Mr. Crouch asked for experiences on building up worn pick and lever screws. Mr. Newton of Spray said that he had done some of this by welding on and then filing out with a rattail file, using acetylene welding. This concluded the discussion and the meeting was adjourned.

See You at Hendersonville!

The annual convention of the Southern Textile Association will be held at the Skyland Hotel, Hendersonville, N. C., on Friday and Saturday, June 24th and 25th. Of course you'll be there. This note is a reminder that you make certain you have reservations. There will be a session on Friday morning, with golf, sight-seeing, etc., on Friday afternoon; the annual banquet on Friday night, and a business session on Saturday morning. See you then!

Card-room Topics Discussed in Meeting at Columbia

Reported by Robert W. Philip

EVERY time J. O. Corn conducts a carding discussion some worthwhile information is developed. The meeting at Columbia, which is accurately reported here, was no exception. This report will start you to thinking and experimenting with regard to curled cotton, neps, one-process picking, spraying oil on cotton, card room changes for long draft spinning—and a number of other timely card room subjects. You are invited to discuss any point covered here in our "How Other Men Manage" department . . . . . .

CARD ROOM questions, some familiar and some new, were thoroughly discussed at a meeting of the Carding Division of the Southern Textile Association, held at the Hotel Columbia, in Columbia, S. C., on Friday, April 22nd.

A comparatively small attendance apparently affected the value of the meeting very little; to the contrary the smaller group permitted an intimacy and thoroughness of discussion that would have been prevented by too large an attendance.

Preliminary to the discussion, H. H. Iler, chairman of the board of governors of the association, asked Walter C. Taylor, secretary, to describe a proposed change in the organization set-up of the association. This Mr. Taylor described in detail, and after some discussion it was decided to defer action on the matter until the annual meeting of the association in June. The plan called for the division of the South into sectional groups, each to operate its discussion meetings separately under the general direction of the parent body.

J. O. Corn, superintendent, Pacific Mills, Columbia, conducted the carding discussion as chairman of the carding division. No set list of subjects had been prepared, the meeting being opened for problems to be submitted by those present.

What Are the Causes of Curled Cotton?

C. L. Chandler, superintendent, Gaffney (S. C.) Mfg. Co., opened the discussion by stating that, "We are running 1⅛-inch cotton and having lots of trouble with the cotton curling. How can we stop it." It was explained that he has a vertical, a No. 12 feeder, and a horizontal cleaner in his opening line.

T. M. McNeill, superintendent, Monarch Mills, Union, S. C., expressed the opinion that "it depends largely on where it is curling. If it is more prevalent at the bale breaker or at the breaker lapper then I would say that he is working the stock too much up to that point. I have had some experience with 1-inch cotton curling due to too much working before reaching the breaker lapper, and I have been able to minimize it to a point where it would not be troublesome by not working it so much up to that point."

"If you will slow the speed of the beater in the horizontal cleaner and speed up the draft a little bit, and pull it through just a little faster, I believe that will help," suggested W. E. Campbell.

O. A. Sullivan, overseer of carding at Mr. Chandler's mills, replied that he had already tried this and that it did him no good. He said, "We have two separate opener rooms, and in one of the mills we have a one-process picker and in the other mill we have a finisher and a two beater breaker, and there is as much difference in the laps as there is betwees day and night. We have the same opening equipment in both. The laps from the one-process picker are worse."

Mr. Floyd of Lockhart suggested that the difference in results might be coming from a difference in the surface speed of the two condensers feeding the different pickers. "I have never had any trouble with curled staple," he said, "but I know at one plant that the cotton did not look quite as open and fluffy coming from a small condenser that we had as that off of a larger condenser, with both condensers traveling at the same r.p.m. We speeded up the small condenser until the surface speed was the same as that of the large one, and it helped us greatly."

"Do you pull from your condenser through your horizontal, and your No. 12 and your vertical in one line?", Mr. Corn asked Mr. Sullivan, who answered that everything after the No. 12 machine is pulled by the condenser, but that the No. 12 has a screen section in it. Mr. Corn said they had had some trouble, and asked C. P. Hamrick, of the Richland mill of Pacific, to tell about it. Mr. Hamrick said, "we had lots of trouble until we speeded up our fans about 100 turns—pulling the cotton through a No. 12, two horizontals and one vertical."

"In the meantime we cut the speed of the No. 12 and the horizontal," Mr. Corn reminded him, "and increased the speed of the fans. That was on 1 and 1⅛-inch cotton; it showed up first on the 1⅛-inch."

"I cut the speed of our horizontals until we couldn't get it through, and then built back up gradually," said Mr. Sullivan. "Last week I jumped the horizontal entirely, and that helped some, but it didn't stop all of the curling."

"Last year we had some of that trouble," said Mr. Campbell, "and I speeded up the fans and cut it out."

A machinery representative was called upon, and said that "When you put cotton through opening machinery you cannot leave it in there too long; and you must have sufficient draft, and at the same time there is such a thing as having too much opening machinery. It depends on the production and the lay-

out you have. I do believe that if Mr. Chandler will speed the fans up and take the cotton out a little faster and not crowd his machinery, it will help him."

What are Neps—and What Causes Them?

Frank D. Lockman, superintendent, Lockhart (S. C.) Mills, started off the next discussion by asking, "If a card will make neps, what particular things about it cause it?"

"We were running 1⅛-inch cotton and couldn't get rid of neps until we slowed the speed of the doffer from 11 to 5½ r.p.m., cutting the production; and running the carding nights to keep up," reported C. P. Hamrick of the Richland mill at Columbia.

Luther Knowles, a traveling salesman, told of overhearing a conversation between two good carders recently, in which one told of eliminating neps by reducing the speed of the cylinder from 160 to around 140 r.p.m. on 1-inch cotton.

J. O. CORN, superintendent, Pacific Mills, Columbia, S. C., chairman of Carding Division, who led the discussion at Columbia.

Mr. Lockman repeated his question by stating that he referred to a card producing about 100 pounds a day; "if the card makes neps in the cotton, what are the particular things that cause the nepping: bad settings, bad licker-in, screens, or what-not?"

"Just what are neps?", asked Mr. McNeill. "They are fibers that are rolled into a ball; it may be one or two or three fibers rolled into a ball. As a carder, my experience has been that neps, all things being equal, if your production is about 100 pounds, will be generally caused by the flats not being set close enough to prevent this rolling of the fibers. I think by setting the flats just as close as you can without rubbing the cylinder, with the other points set up closely, there should be very few neps."

"We tried all settings on 1⅛-inch cotton, and couldn't eliminate the neps in that way, 100 pounds production," said Mr. Hamrick.

David Clark of Charlotte raised the point that he could not see how changing the doffer speed could in any way affect the making of neps on the card.

"It leaves the cotton in the card longer, between the cylinder and the flats," explained C. C. Briggman, superintendent, The Lancaster (S. C.) Cotton Mills.

"When you slow down you are getting more of a carding action on the stock," added Mr. Corn.

"But if the card does make neps," suggested Mr. Floyd, "and will do this in a short time what will it do if it has longer to work on the cotton?" He expressed the opinion that the matter is more one of the condition of the wire—that the wire must be kept sharp—and upon the proper settings.

"When you cut the production of the card in half, what do you do about the licker-in speed; don't you have to double the speed of the licker-in, proportionately?", asked S. G. Touchstone of the Pacific Mills.

"Speeding up the licker-in won't do it; I've tried it," said Mr. Floyd.

On the subject of speed, Mr. Clark pointed out that you can go to one mill that has changed its speed, and to another that is running at the previous speed with no trouble. He said that he had ground cards years ago and that the only way they found in those days to eliminate neps was to set the cards correctly, grind properly, and keep the screens set correctly.

"Had anyone ever tried a wide setting on the bottom back plate for that trouble?", suggested Mr. Floyd.

The chairman called on A. L. Stutts for his experience with neps. "Neps come from the cotton," said Mr. Stutts. "The machine doesn't make them all. Faced clothing will of course cause them, and dull cards. Fine grinding, close settings, and light grinding—that's a good remedy for them."

Robert Huskey, overseer of carding, Whitney (S.C.) Mfg. Co., was called upon, and said, "once we tried to make too much toppings on our flats, and that allowed the neps to come through in lumps and get into the work. You must set the flats so they will go all the way around without getting back into the cylinder."

Mr. Corn mentioned the possibility of doubling the flat speed to eliminate neps. Frank Lockman pointed out that this would increase the strippings, and that the present-day tendency seems to be to reduce the strippings, reducing the flat speeds.

"Then you'll have neps," declared the chairman.

Luther Knowles was asked further questions as to the experience of lowering the cylinder speed from 160 to 140 r.p.m., and answered by saying that the production of 70 pounds a day was retained in making this change. Mr. Floyd pointed out that in such a change there would be no change in the relative speeds of the cylinder and flats.

"I have pulled the stripping door open and noticed a lot of curly-tailed cotton," said Mr. Lockman in speaking of his trouble with neps. "Part of the web across the cylinder would look straight and then every little bit I could see a little long-tailed chunk roll along right by the stripper door."

H. P. Worth, of Saco-Lowell Shops, pointed out that there is a difference in the frequency of stripping at different mills; some mills strip twice a day, some three times a day, and some four times a day, and different mills have different systems of strippings. He said that good card clothing and good settings are essential in preventing neps.

As to possible causes of neps, C. C. Briggman pointed out that faced or dull clothing will cause neps; and "maybe you are not grinding as often as

you should." Mr. Corn added that other causes are low places on the licker-in, bruised wire on the licker-in, and bad screens.

"There is one other point," said H. H. Willis, director, textile department, Clemson College, "and that is the matter of the amount of humidity you are using; when cotton is drier it will curl and nep worse. And another thing: I have tested 1-inch, 1-1/16-inch, 1⅛-inch, and 1¼-inch cotton right through the same machinery, taking different samples of the same length from different sections of the country. They would apparently look the same, but one lot would nep worse than the others; so the variety of the cotton has a great deal to do with it; on the same length cotton coming from different sections, one will nep worse than the others."

F. D. Lockman.

Before leaving the subject of neps, Mr. Corn reverted to the report of slowing down the cylinder speed, declaring that this was "a new one" on him, and he knew nothing about it, but that there might be something in the different centrifugal force of the lower speed; that at the higher speed the cylinder might be throwing the fibers against the flats with greater force, and that this might have a bearing on it, though he didn't know.

What's the Back Plate For?

The next subject was brought up by F. L. Drake, of Pacific Mills, who said, "I would like to ask a question concerning the use of the back plate on a card; What is it for, and what is the proper setting for it?"

Mr. Stutts reported that he sets his to a 17/1000 gauge; Mr. Robinson said 22/1000 top and bottom; Mr. Sullivan 17/1000; and Mr. Floyd said he uses a 22/1000 gauge at the top and a special gauge of 14-gauge tin at the bottom, because with this, "I get better work; the web is clearer, it doesn't look cloudy; and I think I get more trash out on the licker-in, more fine leaf, by having it open at the bottom edge of the back plate."

Robert Huskey told of an experience where by making the setting of the plate closer he changed the color of the toppings; they got dirtier. He said, "I use that plate to control the fly on the card, and I was getting too much, and I set it to a 17/1000, and the toppings were dirtier and the fly was less."

"I set to a 17 and 22," said Mr. Campbell. "I use the taper to keep the flats from filling up below the knee of the wire. If you set it otherwise the flats will have a tendency to load up and the topping comb will not comb it off."

"Would the amount of production on the card have anything to do with it?", asked the chairman. "If you were carding 100 pounds a day and went up to 150 pounds, would you make any change?"

"I would open it a little more," said T. M. McNeill.

"That would be my idea, but I may be wrong," agreed Mr. Corn. "If you were carding 150 pounds a day you would have more stock passing between the cylinder and the flats."

"We card 138 pounds a day and that is why we set to a 22," explained Mr. Robinson. Mr. Campbell pointed out that "you must be governed by the amount of draft and the amount of stock going through."

Mr. Drake reminded the meeting that he had not been advised as to the *purpose* of the plate. Mr. Robinson said it is to correct the air current at the back of the card. The lack of discussion of this point prompted the chairman to say that "I do not think it is just one of those things the machinery people put on there." Mr. Drake pointed out that the shops put the plate on there and set it to a 22 at the top and a 17 at the bottom, and then he asked why. Mr. Huskey said that the plate is to control the air and the cotton.

W. R. Connelly.

David Clark expressed it as his opinion that the shops furnished different styles of plates for different purposes, but Mr. Corn, and Mr. Worth of Saco-Lowell said that there is only one angle used on the plate. The discussion on this question was concluded by the chairman's statement that, "Drake, that plate is a guide for your cotton."

Opening 7x3 Flyers to 7x3⅜.

C. C. Briggman asked for experiences in changing 7x3 flyers to 7x3½; as to the advantages and disadvantages. F. D. Lockman said that he had opened some 7x3 flyers up to 7x3⅜ (which is all he had room for) and that it is satisfactory to do this provided you get good workmanship. "We can get more on the bobbin, about an hour to the doff; and this helps in the spinning, of course." He said he runs this at the same speed as before.

"Do you think the roving is as even as it was before?", asked Mr. Briggman.

"Yes sir, I do," replied Mr. Lockman. "We are making the same roving, 5.68-hank, on an 8x4 frame."

Experiences with Chromium Plating.

The chairman next asked for experiences with chromium plated flyers. Only Mr. Huskey responded, stating that they are experimenting with one set, one flyer each on a slubber, intermediate and speeder, and could make no report. H. H. Iler, who is master mechanic at the Union Bleachery, reported the use of chromium plating on some rolls in dye padders with the idea that the plating is resistant to the dyebaths. However, he said, about two months previous something that looked like an attack began happening to the plating, that they became discolored, though the solutions used on the machines were not supposed to be detrimental to the chromium. He said he has some other chromium plating that is very satisfactory; that it is non-corrosive so far as the vapors in the air are concerned. He said the rolls that first gave trouble were cast-iron with a brass

jacket, with the chromium plating on the jacket; and that on some other rolls that were beginning to show similar trouble the chromium was plated on the cast-iron.

H. H. Willis brought up here a question as to where is the proper point to check on the speed of card flats. He said if a man will put a chalk mark on the flat and arch, and on the first carrier roll, that these two points will not come back together; that they will be as much as two or three flats "off". No one present was able to give an explanation.

Experiences with One-Process Picking.

The last question at the morning session was brought up by Chairman Corn, who asked for experiences with one-process picking—of the "bought" and "change-over" type. He wanted to know the advantages, outside of the labor saving effected.

Mr. Huskey, who has a "change-over" one-process, said, "we have laps that are some evener, yard for yard; and we do not have the lapping on the aprons and our laps come nearer the same all of the time. Our cards run better with less ends down."

Robert Huskey.

"We feel like we get a stronger yarn because we do not beat the cotton as many blows per inch, and still we feel we get as clean work with less beats per inch," said F. D. Lockman, who has a "change-over". "We do not have as much re-worked waste from the one-process as from three processes, and therefore we get better carded work and less split laps. We also feel that we get a more uniform lap yard for yard, which gives us more even yarn."

Here David Clark explained an opening room idea he had recently seen in an Alabama mill—consisting of using six hoppers for feeding the cotton onto a long apron going to the cleaning machine, for securing blending; this apron containing a screen through which quite a bit of loose foreign matter falls as a result of a shaking motion of the apron in its travel.

Joseph C. Cobb, general overseer of spinning at night, Lancaster (S. C.) Cotton Mills, asked if anyone had determined whether they were getting any cleaner work from one process, in the way of motes, etc.

"We feel we are getting cleaner work," replied F. D. Lockman, "but we did other things at the time we changed the pickers and I do not feel that the one-process should get all of the credit for it." He explained that they have a metal screen totaling about 70-feet in their rake distributor over the pickers, and that this helps the cleaning materially, .2 per cent of the total weight of the stock being taken out here alone in the form of dirt, leaf and trash.

Mr. Cobb said they had made some tests and found that they got out quite a bit more motes on the one-process.

C. P. Hamrick reported that he is not getting good results with a "bought" one-process; that his lap is not as even and that it is dirtier. He said he finds streaks in the middle of the lap. In answer to a question from Mr. Floyd, he said his machine contains an intermediate hopper.

"If you have 'bought' machines, do you find it necessary to put in a draft damper on your top screen?", asked the chairman, pointing out that this was formerly done, and "I was just wondering if anyone today finds it necessary to put dampers on to control the draft on the top screens."

Mr. Lockman said he had one machine which gave trouble with draft—streaky places—for several years when he had three processes, and that when he put his machines together he still had that trouble although he changed the draft pipe to the dust house. Finally, he said, Mr. Floyd pointed out that someone had been using the wrong gear on the feed roll; that instead of two 14-tooth gears together someone had substituted a 15-tooth gear—and that the cut-off plate at the back of the plate between the screen and bar had a knife-edge and was too far away, and that they had put a piece of wood about 3/8-inch wide in there to make it like the other machines. This concluded the morning discussion.

Spraying Oil on Cotton—Experience with New Method of Spraying.

After luncheon, the chairman opened the afternoon discussion with a question as to experiences with spraying oil on cotton. He called on C. L. Chandler, superintendent, Gaffney (S. C.) Mfg. Co., who said:

T. M. McNeill.

"We have what is known as the Hill method of spraying. We spray the oil on the cotton just as the Kirschner beater picks it off of the feed rolls. On part of our equipment we have eight nozzles; and on the rest, 16 nozzles.

"We like it. We think that it has helped our work. We know it has helped as to the dust; we do not have anything like as much dust, all the way through the mill, as we did." He called on his overseer of carding, Mr. Sullivan, for further details. Mr. Corn asked Mr. Sullivan how much oil he is putting on.

"We are now putting on around .3 of one per cent," replied Mr. Sullivan. "It probably is a little bit more than that. We have had the spray in there for several months, as a good many of you know. One of the advantages is the elimination of nearly all of the dust. We can strip the cards cleaner; it seems like the cotton pulls loose better. We can put more in the package all along, more in the can and more on the bobbin. The cotton is firmer; you can hold a bobbin up and not see as much short lint on it; it looks better."

Mr. Sullivan explained that on some of his pickers he has 16 nozzles in the spray equipment, which discharges a vaporized oil just above where the cotton is taken off of the feed roll by the final beater. On other machines he has only eight nozzles; the matter being still in an experimental stage, the num-

ber of nozzles being dependent upon the amount of pressure used.

The chairman asked Mr. Sullivan if he had tried higher than .3 of one per cent, and if so, what the results had been. Mr. Sullivan said that as an experiment he went up to better than one per cent, and "came back down just as quick as we could". He added that "I think we could put on more than we are putting on, and stay out of trouble, but we get mighty good results where we are and we want to stay there."

"Just how far through the mill do you notice the effect on the fly and lint?", asked Mr. Corn.

"We do not think there is as much fly in the spinning room," said Mr. Sullivan. "It looks better. We run our humidifiers all of the time, week-ends and all, and our spinner tells us that on Monday morning his travelers used to hang and break a few ends, and that since we have been using this amount of oil that he doesn't have that trouble as much as he did. It seems we are getting a little amount of oil on the travelers and rings."

C. H. Underwood.

"What trouble did you run into when you increased the amount of oil?"

"Filling up on the cards," replied Mr. Sullivan.

"Do you notice any difference in your card web at .3 of one per cent compared to no oil at all," asked the chairman. "Is it as easy to card?"

"Just as easy," said Mr. Sullivan. "It doesn't give us any trouble along where we are now (as to percentage)".

"Would this replace humidity in the card room?", asked T. M. McNeill.

"We haven't tried it," said Mr. Floyd. "We have humidifiers in the card room and have been talking about cutting off the humidifiers to see what the result will be, but we haven't done it yet."

Mr. Floyd asked as to the effect of the oil on the evenness and breaking strength of the yarn.

"We feel like we get evener work, but we haven't run tests on it," replied Mr. Sullivan. "But occasionally we have been without oil temporarily, for one reason and other, and we can see a little slight dropping off in our breaking strength. We can tell just a little difference in the running of it the nearer it gets to the spinning."

"Do your card strips run heavier; do you strip any oftener; is the cylinder loaded any more?", Mr. Floyd next asked, and Mr. Sullivan replied, "No, sir".

"Does the oil leave any trace on the foundation of the clothing?", was Mr. Floyd's next question. "Nothing yet," answered Mr. Sullivan.

"Is there any noticeable reduction in the waste, card sweeps, etc.?", asked Mr. McNeill.

"I suspect there is a little difference," replied Mr. Sullivan. "We do not think we have as much flyings all over the job and on the floors."

"If you put your flyings into the good work, does it show up in the cloth?", asked Mr. Floyd.

"With what we are putting in, it doesn't seem to make any difference," said Mr. Sullivan, adding, however, that if too much oil—say, one per cent—is put on that the work will not look as well.

Mr. Corn asked if he had made any change on the fly frames, as to twist, etc. Mr. Sullivan said that he is troubled a little more with hard ends; that when he went up to ½ per cent of oil he had to take out some twist.

"Does the oil interfere with the drafting on the fly frames?", asked Mr. Floyd. Mr. Sullivan replied, "Not with where we have it now (as to percentage). It is harder to draft."

Mr. Corn said it would seem that it should be easier to draft; and Mr. Sullivan agreed that it would look that way. "You would think that your fibers would parallelize a little better through the drafting processes, and I was wondering if there wasn't a weakening of the draft instead of a strengthening."

"We have had this experience: we find that on local cotton we can put on more oil than on 1⅛-inch Mississippi cotton. The Borne Scrymser people told us that we are the first people who ever sprayed 1⅛-inch cotton satisfactorily."

C. P. Hamrick.

"If you do not make as much dust, where does it go?" asked John S. Lockman, overseer spinning, Lockhart (S. C.) Mills. "I think it goes into the goods," replied Mr. Chandler. "We do know that our total amount of waste has been less since we have been using oil. We keep a record of our waste each month, and for the last four months we have had the lowest percentage we have ever had, and we can think of nothing else to attribute it to." He added that he had been on the same grade of cotton for the last four months as previously.

"I think a lot of this dust goes into the strippings and toppings," said Mr. Sullivan.

"You would have less broken fibers, and therefore less dust," commented Mr. McNeill.

"Well, other than as a dust-down, do you feel like it costs you anything extra to run the oil?", asked the chairman.

"No sir, the first thing we do is to lighten up the lap two or three points," said Mr. Sullivan, indicating that the amount of oil put on remains and the weights are held through the mill, so that the oil is costing him nothing in that it replaces the cotton.

"Did you change your hank roving for the spinning room?" asked J. S. Lockman. "No, sir", replied Mr. Sullivan.

W. R. Connelly called attention to the fact that at a previous meeting Mr. Chandler had reported having one picker room equipped with the system being described, and another room equipped with the older system, and asked for a comparison. Mr. Chandler replied that he has since installed the Hill

(Continued on page 85.)

CURRENT TOPICS

The General Situation in Textile Markets.

SINCE general conditions of business have for the past two years been the measuring stick for the textile industries, it is a hopeful sign that May brought some evidence of an underlying improvement. As has been stated off and on for many months, cotton and wool at least have been relatively better off than most other industries. But incipient rallies, auguring profitable conditions of operation for textiles, have died in the destruction of public confidence by international or national issues disturbing the broad economic position of the country. Thus the early spring was encouraging, but by good providence coupled with reasoned caution the textile producers were not led into rash production by the promise of that time. The subsequent extension of curtailment confirms the soundness of that caution.

It took a long time for all the industries to learn that a complete readjustment must follow the overdevelopment which resulted in the 1929 crash. By this time, it is safe to assert, most of the wasteful methods have gone by the board and liquidation of prices, wages and all costs has proceeded to the point where profitable business may be done on a reasonable operation of plants. The era of mass production wherein quantity of output was deemed the prime way to profit has been largely eliminated. If mass production is to continue, and there are adherents to this principle, there still must be regulation of output to demand. Given a right adjustment of prices to costs, it still is conceivable that mass production will fulfill its purpose of providing more of this world's goods to the whole public. But the start must be made on a sound foundation and develop naturally. Presumably that is now realized, or nearly so.

In view of the new competitive conditions, the cotton industry will perhaps congratulate itself on its multiplicity of independent small units and the lack of precipitation into a few great mergers. For the present, it appears, the smaller manufacturers who can oversee the various phases of their business have an advantage over the great consolidations wherein management perforce is spread widely and no one person can keep an intimate touch with the whole organization. These are days of questioning and the economists and others are wondering what will eventuate from the new start of business. One of the questions over which they are wondering is whether the smaller business of today means a readjustment to the smaller plants and what will be the future of the mass producers. Thus an industry with a preponderance of small units is at any rate at an advantage in that it has nothing to undo and can change to consolidations if the future demands it.

Another Cotton Week has now gone, leaving behind a new consciousness of the vogue which this staple has attained in the style world. Little more could be expected in a time when it was well known that the chief lack of the industry was backward outside economic conditions. But the observance this year was useful as demonstrating the interest of American distributors and consumers of cottons, especially in the striking fact that these fabrics have taken such a hold in the primary fashion center of the world in Paris. The success of a National Cotton Week in years of business adversity is the warranty for its permanent establishment. Much more can be expected of it in the better years to come. The industry has found what valuable co-operation it can get from distributors by a united effort on a constructive program for serving the public: the one purpose for which all manufacture is promoted.

Recent experience has also demonstrated that co-operation in production is the only means whereby the industry can operate to advantage, yet withal it is to be feared that the permanency of voluntary general regulation is doubtful. In fact it appears that only the extremity of business, which by May was probably the most dull and unsatisfactory on record for the merchants and manufacturers, could induce a fairly complete curtailment. A writer recently impeached the leaders of the oil industry for not having enough brains to solve the marketing problem. But it is probably true there, as it is in the cotton industry, that the brains are not lacking. Rather is it that the brains of those who are capable are nullified by those of others who have control of part of the industry. In other words, some people will not "play ball" with the rest until forced to do so. And the reasonable have to suffer with the unreasonable.

In this connection, hearty endorsement must be given the effort of George A. Sloan, president of the Cotton Textile Institute, to show up the evil of selling below cost of production. Certain it is that the time has come for a turn away from emphasis upon price. The whole tenor of advices from distribution circles is that, while prices still must be low, the buyer is going to seek something of quality in the coming year. It looks as though the production that is based soley upon price and ignores quality will be surplus, for the appeal of such merchandise is passing.

Election of Walter S. Brewster, of the Pacific Mills, as president of the Textile Export Association, calls attention to an organization which should be an important factor in the cotton business. If this country is to remain an important exporter of cotton textiles, the offices of such a group will be a prime element in the business. Here is one department of American life where unlimited cooperation is allowed by the Government. There is no anti-trust legislation in our international competition. Judging from the talk of Thomas C. Ballegh, Government agent in Argentina, at the annual meeting of the export associa-

tion, American firms are held in high esteem at least in that part of the world.

New England Mill Situation.

COTTON mills in this northern section of the country have kept step with the whole industry in curtailment through the spring of drastic decline in business. Early in May it was figured in the New York market that fine goods production was averaging not more than 35 per cent of capacity, partly because prices were unacceptably low on orders offered. At that time in one reliable quarter it was estimated that New England production was at an unparalleled low level. Wool manufacture, of which more than fifty per cent is in New England, also was at record low levels. As the result of a disappointing turn of economic affairs in the spring, many cotton mills of New England were finishing up their orders on hand at the end of April and showed little prospect of good bookings on which to continue.

One of the things with which the industry has to contend is the prevailing habit of hand-to-mouth buying, a part of a new economic condition existing throughout business today. The worst phase of such business, perhaps, is that industry feels every change of public sentiment. A better feeling may bring a rush of orders, but this is temporary. When the textile industries were seasonal, as they are not today and have not been for some years, a better feeling would produce a period of reasonable length in which manufacturers could figure upon operations. The better feeling of early in May led to belief that another rush of orders might ensue, as in February and March.

Even hand-to-mouth buying might afford a stable operation of mills if only public confidence could be restored to where normal buying would start and be maintained. Some factors in the trade here look for a substantial consumer demand to develop between now and the fall, because they figure that a large volume of purchases is the logical sequence to a similar void of business in recent years. In such event, the mills and the workers should reap the reward of close operation, that is if buying is large enough to force more extensive production. Careful restraint upon mill production should eventually bring the industry out of a buyers' market, by having supplies at low compass when the demand breaks loose. Incidentally, this is the only way back to a buying ahead; something between the new method and the old at least.

Operating problems, embracing labor and tax-valuation difficulties, have been taking attention in various parts of New England the past few months and have been coming to a head. The Amoskeag Manufacturing Company, of Manchester, N. H., had repetition of its fall experience, when the workers voted to refuse a wage cut the first of April as in October, only to reverse their stand when closing of the plant was threatened. The significant thing about this move is the advancing spirit of conciliation in New England when it becomes evident that mills are driven to the ditch of closing. The Lawrence textile industry, largely wool manufacturing, has also been through a struggle which led to moves among the workers and the city officials to see if the mills could be kept open.

Much discussion has been going on around the group of Maine cotton mills which the Insull electric interests took over some few years ago, but which have been running into difficulties. The talk has run toward linking up with one of the successful large organizations in New England, new management being the chief concern in the present situation. Developments with regard to this important group will be watched with keen interest.

Apart from this situation, another Maine move of interest has been the demand at Lewiston for reductions in assessed valuations by three large mills. Other plants in New England also have continued to be troubled over this matter. One concern, the Ashland plant of the United Merchants and Manufacturers Corporation at Jewett, Conn., recently resumed production after a shutdown resulting from disagreement on taxes, which led to a promise of revaluation. The Ohio Carpet Company's plant at West Warren, Mass., however, was closed the last of April because of heavy taxes planned by Congress.

On the other hand Jerome A. Newman announced early in May plans for resumption of the Pemaquid Mills of New Bedford, recently considered as part of a merger which fell through and subsequent to which Mr. Newman purchased a controlling interest. The plant has 33,000 spindles and 800 automatic looms, which had been idle since March. Mr. Newman is president and treasurer.

National Cotton Week.

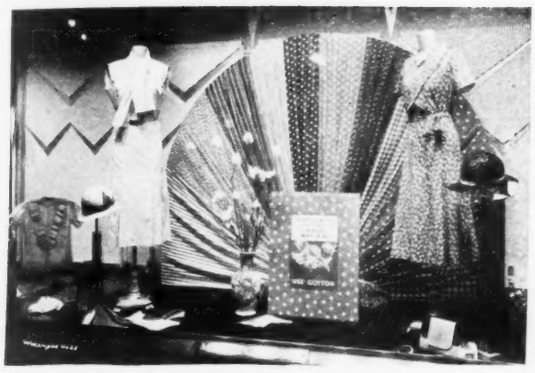
WITH the ending of the week of May 21st, the second National Cotton Week, fostered by the Cotton-Textile Institute, passed into history.

As this is being written, it is difficult to summarize definitely the splendid results obtained. However, it is safe to say that with the vast amount of publicity given, the vast advertising spaces devoted in periodicals and trade papers, the spectacular window displays and the millions of dollars worth of cotton merchandise that were in store at prices within the reach of every one, every effort made was worth while.

One rather outstanding feature of this National Cotton Week was the stress given to cotton suits for men. Many factories have been running day and night to supply the demand for this new type of cotton suit that has had a satisfactory and appealing sales value to its wearers. Another feature has been the stressing of industrial and utilitarian uses for cotton.

Although this week has been depressed by business conditions, the volume of goods that have gone to consumers will compare more favorably with the volume in the week of last year, or a similar week in normal times.

The chief value of this National Cotton Week, however, does not lie in what is accomplished during that week, it is the interest and impetus that is given to the sale and value of cotton values that lasts throughout the year.



James McCutcheon & Co., New York had a colorful display of cotton apparel and piece goods, shown above, during National Cotton Week. This was one display of hundreds of similar efforts carried on throughout the entire country during the week, stressing cotton's style and utility . . . . . .

SO MUCH time and energy have been spent upon the activities of the Cotton-Textile Institute for the last few years that many people have seemed to overlook the silent but still valuable activities of the American Cotton Manufacturers Association.

The American Cotton Manufacturers Association.

Having just attended their annual meeting, it may not seem improper to refer to their activities in regard to national legislation, to cotton arbitration, both as to staple and contract, traffic, rules for buying and selling raw cotton, public and industrial relations, the arbitration of manufactured products and dozens of other things.

Aside from these commercial and economic activities, the American Cotton Manufacturers Association forms a great body of men having cooperative understanding that could never be secured without its functioning. It is a training ground in which the leaders of the industry are developed as is evident by the list of illustrous men who have passed through its activities and offices.

Comment on the Cotton Market

New Orleans, May 14th, 1932

THERE was further liquidation and hedging in the cotton market during the past month owing to the unsettled situation in Wall Street, further curtailment by American print cloth mills, small April domestic consumption, unfavorable returns from the goods markets, and because of the coming of needed rains to the Southwest where the precipitation is probably ample for the present, but a good warm rain would be very helpful from Mississippi eastward to the Atlantic States and northward to Virginia. Compared with one month ago Middling cotton in New Orleans shows a further depreciation in value of $3.65 per bale.

Trade reports in the United States continue generally unfavorable, but much interest is centered in the more favorable progress of late in Washington in efforts to work in the interest of reviving business and restoring confidence. In this respect there appears to be more harmony in Congress where some progress has been made in efforts to balance the federal budget, which task may be accomplished in the not far distant future. Such a development would likely do much to restore confidence. Meanwhile the Federal Reserve banks are at work on a program calculated to increase the circulation of money and stimulate business by easing the credit situation. The lower discount rates at home and abroad make money cheaper. The effect of cheap money in tending to stabilize business may be slow in developing but will likely gain momentum eventually since very low prices for raw material and cheap money seldom fail to improve international trade.

In addition to the necessity of balancing the national budget, there are the problems of war debts and reparations to be solved. As to the latter, a conference is to be held in June at Lausanne. During the same month the conventions for nominating candidates for president of the United States are to be held. Whatever the future may have in store politically, developments on both sides of the Atlantic next month are likely to be of unusual interest and will probably have some, if not much influence on the speculative markets.

The world has had nearly three years of deflation, resulting in one of the greatest depressions, of long duration, in history. But, by reason of the absence, for so long a period, of an urgent demand for the output of field and factory there has undoubtedly been created a potential requisite that may have to be satisfied sooner or later, especially of cotton goods which are used so much to clothe the people of the earth. However, no one can say when the world-wide business depression will come to an end. There is no evidence as yet of improvement in trade in this country, and many knotty problems have yet to be solved.

In Asia, however, where about one-half of the world's population live, wages are generally very low, and it is only when commodities are very cheap that the Far East is able to buy freely and consume largely. This assertion is as true today as it was in the past, being confirmed by the large exports of American raw cotton to the Orient, which thus far this season break all records, totalling to May 13th 3,280,000 bales versus 1,472,000 to even date last season. While the shortage in the cotton crops of India and China last year, and the relative cheapness of American compared with Indian have had much to do with the large Oriental imports this season, it is likely that the comparatively low prices for all descriptions was largely responsible for the extensive buying of raw cotton by Japan and China this season.

Should the European and American trade improve, the outlook, so far as cotton is concerned, would be much brighter unless another large American crop is made this year, which while possible is hardly probable since there is likely to be a sizable reduction in the acreage and a large decrease in the use of commercial fertilizer this year.

The New York Cotton Exchange Service was quoted recently that fertilizer sales are down 40 per cent from last year, but more home made fertilizer is being used this year. Crop making good progress. English and Continental mills find it difficult to sell output. Silk undersells cotton in Japan. Domestic mills curtail sharply as cloth prices break.

Compared with last season, the New York Cotton Exchange Service estimates that the world's consumption of American lint cotton during March was 1,157,000 bales versus 979,000, and for eight months, to end of March—8,373,000 bales against 7,254,000, and estimated that the world's stock of American lint cotton at the end of March was 17,248,000 bales, versus 12,735,000.

BRITISH BOARD OF TRADE REPORT FOR APRIL

Year —	1932	1931	1930
Exports of yarn, pounds	14,000,000	11,000,000	11,000,000
Exports of cloth, pounds	199,000,000	135,000,000	217,000,000

CENSUS REPORT

United States— Bales—	This season	Last season
April consumption, lint	367,280	508,691
April consumption, linters	50,936	67,415
April consumption, including linters	418,216	576,106
Consumption of lint, 9 months	3,937,225	3,892,826
Consumption of linters, 9 months	491,186	521,006
Consumption, including linters, 9 months	4,428,411	4,413,832
Mill stocks April 30th	1,532,967	1,370,680
Stocks in public storage and Warehouses April 30th	8,163,937	6,033,032
Stocks in mills, public storage and warehouses April 30th	9,696,904	7,403,712
Active spindles during April	23,409,246	26,668,536
Active spindles during March	24,818,008	26,504,132

During the past week the South marketed 91,000 bales versus 96,000 for corresponding week last season, and from August 1st to May 13th 15,028,000 bales against 13,607,000.

EXPORTS FROM THE UNITED STATES, INCLUDING CANADA, AUG. 1 TO MAY 13

To— Bales—	This season	Last season
Great Britain	1,159,000	1,015,000
Continent	3,106,000	3,533,000
Orient	3,280,000	1,472,000
Canada	161,000	178,000
Total	7,706,000	6,198,000

SPINNERS TAKINGS OF AMERICAN COTTON, AUG. 1 TO MAY 13

Bales—	This season	Last season
Southern mills	3,903,000	3,650,000
North and Canada	1,255,000	1,401,000
European mills	4,148,000	3,742,000
Oriental mills	2,679,000	1,125,000
World	11,985,000	9,918,000

WORLD'S VISIBLE SUPPLY OF AMERICAN COTTON MAY 13

Bales—	This year	Last year
Interior towns and ports of the U. S.	6,096,000	4,814,000
Afloat to and at ports of Europe	1,321,000	1,610,000
Afloat to and at ports of the Orient	1,071,000	470,000
	8,488,000	6,894,000

Compared with last year the world's visible supply of other kinds on May 13th was 1,984,000 bales versus 2,542,000, and of all kinds 10,472,000 against 9,436,000.

In early May Washington advised to effect that the Farm Board announced that sales of 650,000 bales of the 1,300,000 bales held by the Stabilization Corporation, will be made by the corporation during the cotton year beginning August 1st next and will not be limited to a monthly minimum amount, and that every effort will be made to distribute sales throughout the season without disturbance to the market, and that it is understood also that the cooperatives, which at present are holding about 2,100,000 bales, will hold this cotton until July 31st, 1933, unless it can be sold around 13 cents.

While stocks of American lint cotton in the world at the close of March were reported as 4,513,000 bales larger than on corresponding date last season, it is probable that the Farm Board and the cooperatives may withhold all told about 2,750,000 bales from the market next season unless the price advances to around 13 cents, in which case holdings of cooperatives would likely be sold. Southern bankers are supposed to be holding a very large line of spot cotton also.

The outlook for the new crop, therefore, becomes increasingly interesting, for while the end of this season's world's carry-over of American will likely be very large, perhaps over 12,000,000 bales of lint versus 8,710,000 last year, the possibility of so much of the world's carry-over being held off the market next season, will probably force the trade to depend very much on the final outturn of this year's crop now in the making, unless there be a good increase in the aggregate of foreign growths.

Private estimates as to the probable decrease in this year's cotton acreage range from about 5.9 per cent to 16.5 per cent decrease, averaging about 8.7 decrease for the belt.

Recently the National Fertilizer Association reported fertilizer tag sales in thirteen Southern States for April were 77 per cent of sales for April last year, but for four months —January to April inclusive, sales were 60 per cent of sales for corresponding period last season.

TOTAL AVERAGE RAINFALL IN TEXAS

In inches— Year—	1932	1931	1930	1929	Normal
April	2.49	2.36	1.95	2.42	3.16
Nov. to April inclusive	18.23	15.31	11.81	13.75	13.35

Except from Texas, not much has been heard of the boll weevil thus far, but College Station, Texas, recently reported: "The boll weevil emergence at College Station continues to run high and ahead of all previous records. During March and April, 6.42 per cent have come out of winter quarters."

Washington's weather and crop summary for week ended May 10th—"In the western cotton belt planting cotton made mostly good to excellent progress, with cotton largely seeded north to central Arkansas. In Texas cotton made fair to good advance, with some up to fair stands in the northern part of the state; and the more advanced plants in the extreme south are about ready to bloom. In the southeastern belt conditions were somewhat less favorable because of continued drought, with germination slow and irregular and growth indifferent in many places. The latter part of the week was too cool in the northeastern belt but mostly dry weather favored planting, which has begun northward to Virginia. A good warm rain would be very helpful from Mississippi eastward to the Atlantic States and northward to Virginia."

What the Southern Mills are Doing

SUB-CONTRACTS have been let by Potter & Shackleford, Inc., general contractors, on the three additions to the Eureka Cotton Mills, Chester, S. C. The mills are controlled by the Springs interests of Lancaster, S. C.

Peerless Woolen Mills, Rossville, Ga., are installing 40 new looms; and the new warehouse is rapidly being completed.

Washington Mills Co., Fries, Va., are overhauling their machinery with the Guillet overhauling system purchased from the Dixie Spindle & Flyer Co., of Charlotte. The spinning of the Golden Belt Mfg. Co., Durham, N. C., is being overhauled by the Dixie firm. The Dixie company is equipping the steel rollers of spinning frames at the Mary-Leila Cotton Mills, Greensboro, Ga., with Guillet's tapered fitting necks, and this work is being done also at the Rosemary Mfg. Co., Rosemary, N. C. The Guillet overhauling system has also been purchased by the Erlanger Cotton Mills, Lexington, N. C.

Control of the Ideal Mercerizing Co., Burlington, N. C., has passed to Robert Neville under the terms of an agreement between Mr. Neville and C. B. Phillips, an associate since the plant started three years ago. The plant has a capacity of 60,000 pounds a week, of yarns.

Morton Machine Works, Columbus, Ga., have completed the installation of a Morton improved double circulating raw stock dyeing machine in the Meritas Mills, Columbus, Ga., making the third installation of the Morton equipment in this mill in the last few months.

Rowan Cotton Mills, Salisbury, N. C., have purchased the Diamond Cotton Mills of Salisbury and are making improvements for resumption of operations immediately. New machinery will be installed and an addition costing $50,000 added.

Superior Yarn Mills, East Monbo, N. C., are installing R. I. Humidifier & Ventilating Co. humidifying system with automatic control in their plants at East Monbo and Long Island, N. C.

An addition 65 x 100 feet is being made to the slasher room of Mill No. 4, Erwin Cotton Mills Co., West Durham, N. C. It will be of brick construction and will be used for storage of warps, etc., to relieve congestion.

Jackson Mill, Mill No. 2, Wellford, S. C., is installing sufficient Barber-Colman spooling and warping equipment to handle the mill's entire production of warp. Jackson Mills, Mill No. 1, Iva, S. C., replaced spooling and warping equipment earlier in the year with Barber-Colman machinery.

The spooling and warping equipment at the Kershaw Cotton Mills, Kershaw, S. C., is being replaced with Barber-Colman machines.

Cumberland Silk Mills, Rockwood, Tenn., are planning an increase in their capacity.

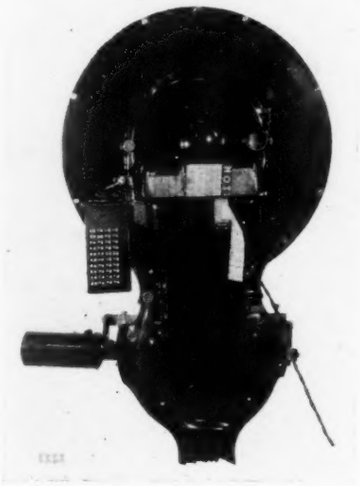
R. F. Goodroe, of Atlanta, is in charge of re-arrangement of the card room at the Aponaug Mfg. Co., Kosciusko, Miss., and also of the re-location of the dyehouse and re-arrangement of the slasher and warper room at the J. W. Sanders Cotton Mill, Starkville, Miss.

Bids have been received by Anderson Cotton Mills, Anderson, S. C., for remodeling the building and adding a new roof.

New Textile Equipment and Publications

Printed Weights in Textile Mills.

Operating executives in all branches of the textile industry will be interested in a recent announcement by the Toledo Scale Co., Toledo, Ohio, of the perfection of a new automatic scale which prints the weights clearly and indelibly on an inserted ticket, or on a continuous strip, or on both. Any desired identification number can also be printed opposite each individual weight. The machine is announced as the first printing scale practical for use in industry, and, the manufacturers point out, provides the same positive protection of weight figures that adding machines and check protectors give to dollars and cents figures.



The Toledo Printweigh.

The new scale operates instantaneously. Its operation may be briefly described as follows: A ticket large enough to accommodate 20 or more weight figures is inserted in a holder in the back of the scale dial. When the weight is placed on the platform or moves onto the "live rail" of an overhead track system, the automatic indication comes to rest according to familiar practice. This indication can also be read by the operator from the back of the scale, where he has inserted the ticket. When the indicator stops at the correct weight, the operator touches a button, which, in one-tenth of a second, prints the weight of the commodity on the ticket and the continuous strip. There can thus be no error either in reading the scale or in recording the weight figures, it is pointed out.

In the new scale, fundamental obstacles to the principle, previously encountered, have been overcome by making the printing wheel a thin, light, flexible disk, and causing the disk, the paper and the inked ribbon to be squeezed between two platens with the paper between the ribbon and the disk. With this arrangement the disk is stopped easily and quickly in correct position. No blow is transmitted to the mechanism and no ink is deposited on the type.

The Printweigh has recently been improved by the application of three features: the selective numbering device, the delayed time switch, and the application of the photo-electric tube or "electric eye". The selective numbering device provides a system of identification with many applications, such as dating, batch numbering, grading and numbering by lot, by operators or by employee group numbers. This improvement is a device which is composed of from one to four digits, symbols or letters, attached to the Printweigh, so that the numbers or letters punched by the operator will be reproduced on the printed weight ticket. This gives a certified weight as well as a certified record of the process in question.

The delayed time switch simplifies the use of the device in a conveyor system. As objects come down a conveyor line and move on a scale, the necessary moving makes the scale indicator oscillate. If the weight were printed at once, there would be a chance of inaccuracy. The delayed time switch delays the printing of the weight until the indicator has stopped oscillating.

The electric eye makes the printing operation automatic if desired. Objects moving across the scale platform on a conveyor section may have their weight printed when they intercept a beam of light just before they leave the scale. Hence, the weight ticket is printed automatically.

The manufacturers point out that one outstanding application of the Printweigh scale is in the receiving of bales of cotton, where the printed weight ticket, an absolute certification of the weight, may be compared with the shipper's billed weights before invoice is passed for payment. Another use is in the dyehouse, for definitely certifying receiving and shipping weights.

In the shipping operation, it is pointed out, the Printweigh has another useful application. Every bolt of cloth can carry its own printed weight ticket if desired; each unit in a shipment can be weighed and then the total shipment re-weighed to detect an omission. The manufacturers state, "Where bills to customers are based on weights, the Printweigh is most valuable for the billing clerk in typing the invoice to the customer, takes her figures not from dim hard-to-read or possibly transposed hand-written figures, but from a machine record which cannot be wrong and cannot be misread. Accurate automatic scales have long been available to the textile industry, and while they have indicated the correct weight, nevertheless the recording of these weight figures has been subjected to the human element and exposed to dangerous errors between the time the scale is read and the time the weight figures reach the shelter of mechanical accounting equipment. Now this gap is closed and mechanical precision takes the place of the human element."

The Printweigh, it is stated, may be attached to any late model Toledo dial scale now in use or installed in connection with a new scale.

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Handbook for the Hosiery Dyer.

E. F. Houghton & Company, Third, American & Somerset Streets, Philadelphia, Pa., have compiled and are issuing "Houghton's Handbook for the Hosiery Dyer", prepared by the company's research staff. Descriptive information of the various products of the company for use in hosiery dyeing and finishing are given, and in addition there is supplied a section of useful reference tables, conversion tables and other data of use to the dyer. A new boil-off product which can be used with either one-bath or two-bath dyeing is included in the descriptive section. The company points out that this product may be used in Monel metal dyeing equipment in one-bath dyeing without oxidation or reduction of black or gray dyestuffs.

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For Perfuming Hosiery.

Del-Odor is the name of a new product developed by E. F. Houghton and Company, Third, American and Somerset Streets, Philadelphia, Pa., in the form of a perfumed finishing oil, which is dissolved in the last rinse after dyeing, for imparting to hosiery a fragrant lasting perfume which, it is stated, will not be driven off in boarding or be

lost if the hose are kept in stock for several weeks. It is explained that this product provides an unconscious sales appeal by imparting a delicate lasting perfume to hosiery at a minimum cost.

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Booklet on Rounded Belt.

J. E. Rhoads & Sons, 35 North Sixth St., Philadelphia, Pa., have issued a bulletin describing their new product—Tannate special rounded belt. This is a new belt of the Rhoads Company produced from start to finish in their own tannery and factory from carefully selected hides and with a special tannate. The belt is supplied in a specially designed container from which it can be unwound without removing the spool from the box. Information as to how to get the best results from belts is included in the folder.

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V. D. Anderson Company Add New Trap to Silvertop Line.

The V. D. Anderson Company, Cleveland, Ohio, have just announced the development of the No. 11 Silvertop Steam Trap, which embodies some radical differences in construction. The trap is extremely light in weight, and small in size, therefore requiring little space for pipe connections, making it especially suitable for jacketed kettles,

New Small Trap.

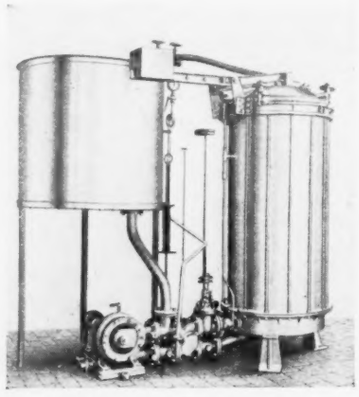
heating coils, unit heaters, and many other types of small steam using units. The No. 11 trap can be furnished chromium plated and highly polished, for use where it is desirable to have a finished appearance on the trap and the units on which it is used.

The few working parts of the No. 11 trap, the manufacturers point out, are made of heat-treated stainless steel. The trap may be taken apart for inspection, without disturbing the pipe connections, by the removal of one bolt. The valve and seat are nitralloy, heat-treated to diamond-like hardness. It may be used either as an elbow or straight in line. The manufacturers further point out that it has an unusually large capacity for its size and is non-air binding and automatic in operation. It is regularly furnished with ½-inch pipe connections, though ¾-inch connections can be furnished.

:: :: ::

Rayon Package Dyeing Machine.

A new type of rayon package dyeing machine, called Model Kraku, has been announced by the American Obermaier Corporation, 11-20 Forty-Ninth Avenue, Long Island City N. Y. The manufacturers point out that this provides even dyeing of two pound packages; eliminates skein winding, preserves the original quality of the yarn without breaking the filaments; and eliminates bar-effects. It is announced that the machine has been in practical operation for quite sometime, after a number of years of development; and that several hundred thousand pounds of rayon in the package form have been dyed and delivered to all sorts of trades, including weaving, knitting, upholstery and plushes.



For dyeing rayon packages.

:: :: ::

New Self-Inking Roller Brander.

A new type stenciling outfit has been announced by the Everhot Manufacturing Company, Maywood, Illinois. This is a stenciling or branding outfit which is furnished with or without ink drying attachment and is especially recommended for stenciling corrugated fiber boxes, paper or fabric bags, etc. The brand is rolled along, producing a continuous stencil from a few inches to hundreds of feet long as desired. The heating or ink drying element, which is optional equipment, enables the operator to stencil damp, wet, greasy or oily surfaces, it is pointed out. The heating element is readily applied by plugging the electric cord into a light socket, and its size and capacity can be varied as desired.

Designs and trademarks as well as different kinds of lettering may be worked out on the cylindrical stencil.

New Series Pilot Unit.

The Fisher Governor Company, Marshalltown, Iowa, have announced the development of the Series 4200 Wizard Pilot Unit, which involves a new design that includes the pilot valve as an integral part of the main valve top work. This unit utilizes auxiliary air or gas as an operating medium and is suitable for all pressure conditions of

Series 4200 Pilot Unit.

five pounds and up. It is easily converted from a pressure reducing valve to a pressure relief valve by a simple change made in the pilot valve. It is furnished complete with a small auxiliary regulator and with pressure gauge. It is pointed out that this unit is being used extensively in operations where extremely close limits of regulation must be maintained. The elimination of time lag has been accomplished in this new design which incorporates the pilot with the main valve, it is pointed out. The equipment is described in the company's Bulletin 70.

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The New Kron Scale.

The Kron Company, Bridgeport, Conn., (formerly American Kron Scale Company) have just announced improvements in their line of industrial scales as regards appearance and operating mechanism. It is explained that over 48 bearing points have been eliminated in the dial mechanism, the six remaining bearing points being of specially designed anti-friction type. These pivot points are ball bearings, made of high carbon chrome steel, each being tested for extra free operation so that friction at the pivot points is practically eliminated. The bearings are sealed in a dust-proof housing. The sector has been so constructed as to offset vibration that may be present in the building in which the scale is located. The pointer points and remains steady

AS COTTON PROSPERS

call more and more on GOODYEAR

TUNE IN: Goodyear invites you to hear the Revelers Quartet, Goodyear Concert-Dance Orchestra and a feature guest artist every Wednesday night, over N.B.C. Red Network, WEAF and Associated Stations

The growing popularity and use of cotton is of real interest to Goodyear. Itself one of the world's very largest users of cotton—for tires and mechanical rubber goods—Goodyear in turn offers its goods and services to meet the needs of cotton manufacturers.

Goodyear's experience in building more efficient, more economical equipment for textile mills is apparent in the special construction—and the special performance—of Goodyear Belts and Hose for cotton mill service.

Look at those two successful recent developments in Goodyear Belting—Goodyear COMPASS (Cord) Endless construction, and Goodyear THOR seamless construction. Practically stretchless, protected at the edges, capable of delivering full power throughout a long, long life of trouble-free wear, their very qualities are those most called for in textile service. Goodyear Hose for clean-up duty is another money saver.

An extra value—the PLUS that comes with the use of Goodyear Belts and Hose—is the expert service of the G.T.M.—Goodyear Technical Man. His friendly analysis of individual operating conditions—and his accurate specification of Goodyear Mechanical Rubber Goods to cotton mill duty have made money and saved money for many.

Have you ever discussed your belt and hose needs with the G.T.M.? It would pay you to do so. A line to Goodyear, Akron, Ohio, or Los Angeles, California, or to your nearest Goodyear Mechanical Rubber Goods Distributor will bring him.

THE GREATEST NAME IN RUBBER

GOODYEAR

TEXTILE BELTING

at the proper weight, it is explained. There is only one point for adjusting the scale. The new dial is improved in appearance, and the face of the scale is bordered with a handsome chromium plated ring on both outer and inner circles.

:: :: ::

New Metal Shower Compartment.

The Sanymetal Products Company, 1722 Urbana Road, Cleveland, Ohio, have announced a new type of shower compartments, of all-metal construction, built in three galvanized steel sections, with steel receptacle and drain. It is finished in gray baked enamel, for assuring rust-resisting installation. The

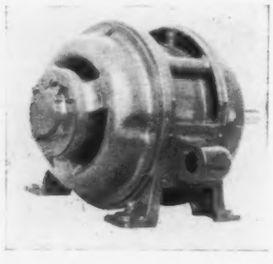
Industrial Shower.

shower is completely equipped with hot and cold water valves, riser, shower head, curtain and drain. It is light in weight and may be easily moved. It has an especial application in industrial plants and similar adaptation.

:: :: ::

A New Screenless Open Textile Motor.

A new screenless open motor designed to meet conditions encountered in the textile industry, where the atmosphere is heavily laden with floating particles of lint, has been announced by the General Electric Company, Schenectady, N. Y. In designing this new motor, it is explained, no attempt has been made to prevent lint from entering the motor. In this regard, the air passages have been so constructed that as soon as lint enters the motor it is immediately blown out. This improvement has been made possible through the following features of construction: smooth glossy windings to which lint will not adhere, no pockets or recesses in or about the windings; large, well-placed frame and shield openings which allow lint to pass freely in and out; and dust and oil-tight bearing housings for eliminating lint-catching spots of oil or grease on the motor.



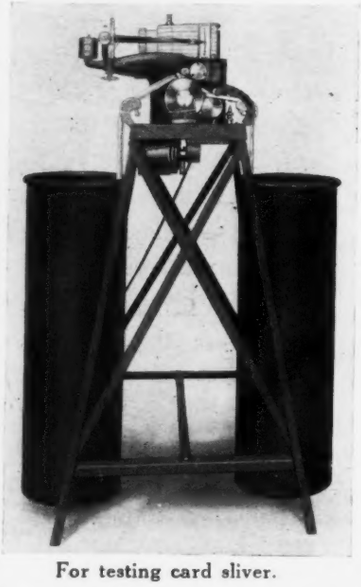
New Textile Motor.

With this construction, it is explained, manufacturing and maintenance costs are reduced, the uses of screens is eliminated, and the necessity for totally enclosed motors is limited.

:: :: ::

Saco-Lowell Sliver Tester.

Saco-Lowell Shops, 147 Milk St., Boston, Mass., have announced the development of a graphic sliver tester, as a contribution to the field of research and to the characteristics of sliver and coarse roving. By its use, it is pointed out, new ideas and accurate knowledge are replacing faulty conception and erroneous conclusions concerning these details of cotton manufacturing. The device portrays the linear irregularities of sliver and roving, and shows these on a chart. The sliver tester is operated by passing the material under test through hardened stainless steel test wheels, which are so accurately ground and fitted, it is explained, that variations in volume of .000004 cubic inches are readily detected. The movements of the test wheel are transmitted by a system of levers to a capillary pen which records the movement on a chart.



For testing card sliver.

This chart is driven by a very accurate system of gearing and is so timed that 36 inches of chart represents 36 inches of sliver, or by changing the second ratio, 3 inches of the chart will represent 3 inches of sliver. It is pointed out that this tester supplements existing equipment and permits the exploration of many fields of research hitherto neglected. Among the questions which the proper use of the machine will answer, it is stated, are: Will cotton of one variety draw more evenly than another variety? Are the slivers from all the cards uniform? What is the best roll setting? What is the effect of speed in the drawing frame on the evenness of the sliver? What is the relation between roll settings and drafts?

:: :: ::

Booklet on Treating Problems.

Laurel Soap Manufacturing Company, Tioga, Thompson and Almond Sts., Philadelphia, Pa., have issued an interesting booklet entitled, "Your Treating Problems" which deals with the various treating problems in the processing and finishing of textile fibers and fabrics, and gives a list of the products of this company for these purposes together with the application for which they are produced. These include olive soaps of various types, palm oil soap, scouring and fulling compounds, sulphonated oils, penetrants, softeners, needle oil, etc., etc.

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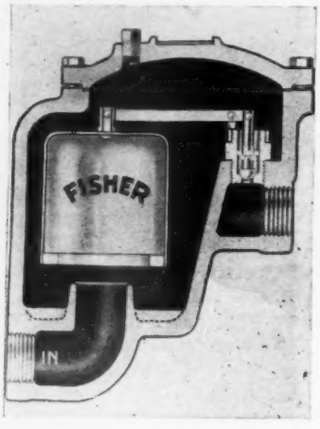
Fisher Class ST Inverted Bucket Steam Trap.

Fisher Governor Company, Marshalltown, Iowa, have announced the Fisher Class ST Trap, embodying new features such as an adjustable valve post, positively guided inner valve. etc. The company points out that among the

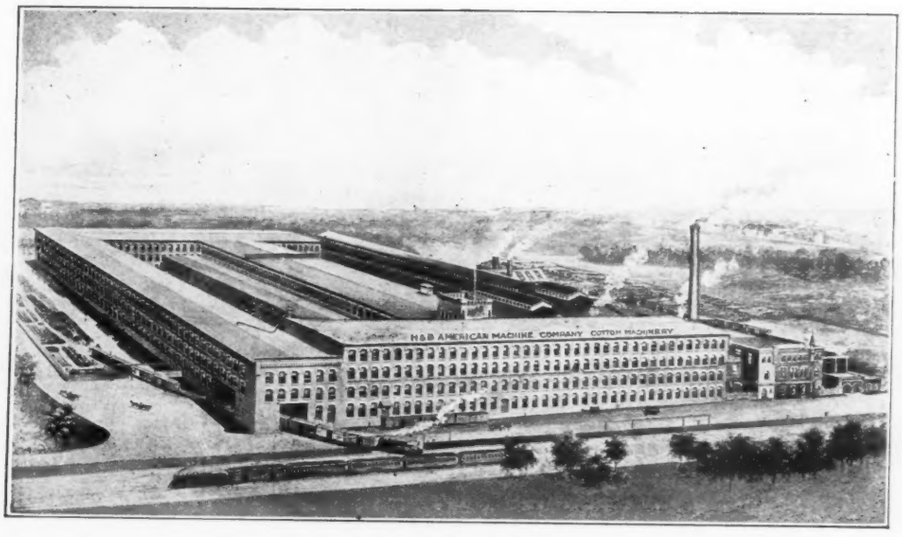


ST Bucket Steam Trap.

construction features are: "body and cover of semi-steel with rugged strength; inverted bucket of heavy gauge spun brass, lever and pins of stainless steel. Valve and orifice seat are of high quality heat treated stainless steel, resisting temperature, wire-

H & B AMERICAN MACHINE CO.

PAWTUCKET RHODE ISLAND



BUILDERS OF

COTTON PREPARATORY & SPINNING MACHINERY

INCLUDING

A-1-ONE PROCESS PICKING

REVOLVING FLAT CARDS

NEW MODEL MECHANICAL STOP-MOTION DRAWING FRAMES

SLUBBING-INTERMEDIATE-ROVING FRAMES

NEW MODEL HIGH-DRAFT SPINNING FRAMES

MEDIUM AND HEAVY PATTERN TWISTERS

——ATLANTA OFFICE——

815 THE CITIZENS & SOUTHERN NAT'L B'K BL'D'G.

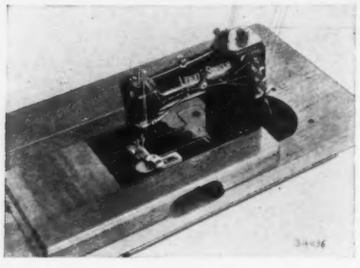
drawing, and corrosion. The guided inner valve insures positive seating. The valve post has special adjustment for ease of setting when replacing parts. Pipe connections are horizontal with vertical offset."

It is pointed out that all parts are easily inspected or renewed when the trap cover is removed, and are accessible and renewable while the trap is connected in pipe line. The new trap is described in Bulletin ST-10, which gives all of the capacity information in pounds of water handled for each size of trap on the various pressures, as well as all principal dimensions, etc.

:: :: ::

Isolated Installation for Sewing Machines Announced by Union Special.

A new type of mounting has been developed by the Union Special Machine Company, Chicago, Illinois, for their new sewing machines. With this mounting, the machines are not bolted or fastened to the tables, resting on insulating pads or bushings which set in



"Isolated Installation".

the table boards. This, it is pointed out, isolates the machine from the vibration of the table. This "isolated installation" is furnished for the Fifty-Thousand Series of machines such as sleevers, in connection with the "semi-submerged" type of installation. The machine rests on insulators contained in a sub-base attached to and really a part of the table top, bringing the working surface of the machine approximately 2¼ inches above the table top. The new type of mounting is regularly furnished also with new over-edgers in the Thirty-Nine-Thousand series and with hosiery seamers in the Class 41200.

:: :: ::

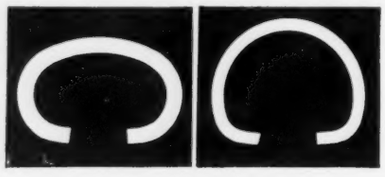
Fletcher "Duplex" Doubler-Twister.

Among the machines creating a large amount of interest at the Knitting Arts Exhibition in April, was the new Fletcher "Duplex" doubler-twister of Fletcher Works, Philadelphia, Pa., operating at a spindle speed of 10,000 r.p.m. on 7-thread hosiery tram, 20 turns; or at more than twice the customary production. The manufacturers state that the twist was absolutely uniform, as checked at the show with a twist tester and re-checked following the show. Features of the new machine include "Oilwell" spindles, large double feed rolls, patented sliding motor drive, and swing rings which are individually adjustable. The machine is described in the company's new Bulletin No. 39.

:: :: ::

New Light-Running Traveler.

A new ring traveler for horizontal rings has been announced by the Victor Ring Traveler Company, Providence, R. I. This traveler, known as the Circle-D, is oval in shape as distinguished from the semi-circular contour of the usual traveler (see illustrations). The manufacturers point out that this shape reduces friction and reduces wear of the traveler and the



Left, new oval-shaped Circle D; right, regular style traveler . .

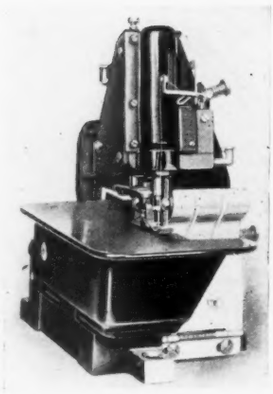
ring, providing a more even tension without strain on the yarn, and permitting a traverse motion of the yarn along the traveler, lessening the tendency of the yarn to cut the traveler in a single place.

When in use, it is explained, the balance between the traveler, the tension of the yarn, and the centrifugal force, is such that the traveler substantially "floats" around the ring in contact at only one point on the inside of the flange of the ring. It is pointed out that the reduction of the contact between the traveler and the ring to a single point means an increase in the operating life of the traveler. Also, it is stated, the "floating" action allows a considerable step-up in spindle speeds with no perceptible increase in the ends down; and that the quality of the yarn is improved since the traverse of the yarn along the traveler prevents sharp grooving and consequently abrasion of the yarn.

:: :: ::

High Throw Overedge Machine Developed for Chenille Rug Finish.

A new overedging machine has been developed in the sewing laboratory of the Union Special Machine Company, Chicago, Illinois, to overedge chenille rugs, felt pads and similar articles. It has the sewing capacity necessary to produce a secure and durable edge finish on thick and loosely constructed materials, it is stated. It is designated



High Speed Over-edger.

as style 29300Z. It is explained that the construction of chenille rugs requires a specially strong and durable finish, since frequent laundering must be withstood. For reinforcing purposes, the machine guides a tape along the edge and covers it with the over-edge stitching and also prevents the appearance of frayed edges. The new model is a high speed machine.

:: :: ::

New Type of Clearer.

A. C. Lawrence Leather Company, Peabody, Mass., and Greenville, S. C., have developed a new type of clearer called the Lawrence Clearapelt Cot. This cot is made by the use of pure virgin wool, held in its natural foundation—the animal skin—which is supported on the clearer board by metal hooks. It is pointed out that the density and softness of the wool fibers used makes the cot an effective brush, and also that the leather base has no pins to rip it.

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Makers of Non-Fluid Oil Celebrate 36th Anniversary.

The New York & New Jersey Lubricant Company, 292 Madison Avenue, New York City, manufacturers of "Non-Fluid Oil", recently celebrated their 36th anniversary. The discovery of the principle by which Non-Fluid Oil is manufactured was made by a small group of men thoroughly familiar with the problems of lubrication on textile machines. After extensive tests, they were convinced that they had worked out a solution for the dripping, leaking, wasteful qualities of ordinary lubricants. The company has always maintained a large number of practical textile mill men on its selling staff. During the past two years its laboratory and experimental departments have been enlarged, so as to enable the company to keep pace with the continuous improvement in all forms of textile machines and to render an up-to-the-minute service on problems of textile mill lubrication.

PRIVATE LINE TELETYPEWRITER SERVICE

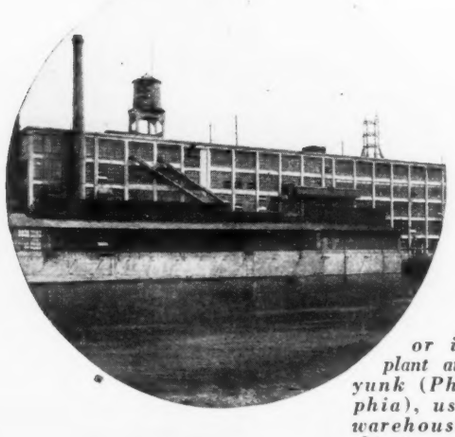
SPEEDS ORDERS . . . INCREASES EFFICIENCY

for the

Collins & Aikman Corporation

Messages typed in the New York headquarters of the Collins & Aikman Corporation . . .

are identically reproduced in typewritten form at the same moment in this mill in West Philadelphia . . .



or in this plant at Manayunk (Philadelphia), used for warehousing and shipping.

TELETYPEWRITER SERVICE—*typing by wire*—is flexible and broad in scope and is being profitably applied to business in general. The Collins & Aikman Corporation uses it to transmit such contrasting matters as styling information and accounting details, production messages and freight car numbers, warehouse instructions and requests for samples.

Private line Teletypewriter Service connects the company's New York executive offices with two mills in Philadelphia, permitting the direct and instantaneous exchange of typewritten messages throughout each business day. "It not only brings greater speed in the handling of orders and shipments," says the Comptroller, "but it is a decided factor in increasing efficiency all along the line." All departments utilize the service, an average of 125 messages a day being exchanged. The New York office is able to keep track of the status of orders through all the stages of production, and can advise customers at any time concerning deliveries.

Textile companies, large and small, are finding that Teletypewriter Service not only speeds operations, but reduces costs. Distance is no barrier—300 feet or 3000 miles are easily covered. Any number of separated offices may be connected.

Your local Bell Telephone Business Office will gladly give you full information.

BELL SYSTEM

NEWS ITEMS *with a Textile Slant*

Cotton Cloth, Tags, Replace Burlap on Baling Wire Ties.

Cotton made into cloth by manufacturers in the South will replace burlap for end wraps used on all baling wire bundles manufactured and sold by the American Steel & Wire Company, Chicago, Ill., it is announced. Not only will hundreds of bales of cotton be used in this manner annually, but all tags used on the wire will be made of cotton cloth. The end wraps will be dyed blue and distinguished by the trade name, Bluebonnet, the name being taken from the state flower of Texas. Cotton is being used, company officials say, in an effort to aid in the recovery of southern agriculture and industries.

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Cowles Detergent Opens Own Office in Atlanta.

Marvin F. Bass, southern manager for Cowles Detergent Co., Cleveland, Ohio, has opened offices in the Hurt Building, Atlanta, Ga., and is representing the company in the textile trade with the complete line of Cowles detergents, including "Escolloid", a special textile detergent. The company had not previously been represented in the textile trade in the South by their own salesmen, and believe that closer cooperation and better service can be rendered through their direct representatives. Mr. Bass is covering eight southern states, including the Carolinas, Georgia, Tennessee and Alabama.

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Change in National Oil Products Company Policy.

Charles P. Gulick, president of the National Oil Products Co., Harrison, N. J., has announced a complete reorganization of the Nopco personnel and policies. The company now serves its customers by industries rather than by territorial locations, and department managers have been named by Mr. Gulick to specialize and devote their entire time to various industries. The new heads of the various departments are: G. D. Davis, general sales manager; O. E. Lohrke, manager Paint, Oil and Metallic Soaps Division; Dr. C. I. Post, manager Tanning Oil Division; T. A. Printon, manager Textile Oil Division; L. D. Grupelli, manager Technical Sales Promotional Department; Leslie M. Brown, Director of Sales, Farm Feed Division. The Nopco Laboratories are headed by Ralph Weschsler, Dr. K. T. Steik is research director. L. W. Davis, Dr. D. S. Chamberlin and R. E. Porter are members of the Technical Staff. The company's staff has been further strengthened, according to Mr. Gulick's announcement, by the addition of four new men, E. C. Rebholts, formerly purchasing agent for Klot's Throwing Company, and vice-president of the New York section of the Purchasing Agents Association; H. F. Leupold, formerly a member of Cheney Brothers laboratories; G. W. Standish and S. S. Mattison.

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Patent Granted on Grip-Rite Tension Device for Full-Fashioned Footers.

Recently United States Patent No. 1,835,654 was issued to C. T. LaMont of Milwaukee, Wis., covering the invention of the Grip-Rite tension device for full-fashioned footers. This attachment is distributed exclusively by the Fidelity Machine Company, Philadelphia, Pa., and they report that with the vogue for meshes and the necessity of reducing seconds to a minimum on the fine gauges, the Grip-Rite attachment has been enthusiastically received by the full-fashioned mills.

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Swann Chemical Enlarges Sales Organization.

As the result of a comprehensive business survey covering a large part of the United States, new sales offices are being opened in five of the large centers and sales representatives are being placed in ten other cities by The Swann Corporation, manufacturers of chemicals, according to a statement made recently by Theodore Swann, president of the corporation. In addition to the previous offices at Birmingham, St. Louis, Cincinnati and New York, new offices are being opened in Boston, Baltimore, Pittsburgh, Charlotte and Dallas; and sales representatives have been placed in Albany, Harrisburg, Camden, Cleveland, Louisville, Knoxville, Memphis, Atlanta, Jacksonville, and New Orleans.

The Swann Corporation, of which Mr. Swann is president, is a holding company formed in 1928 for the purpose of unifying the operations of a number of chemical companies. It owns the following subsidiaries, all actively engaged in chemical manufacturing: Swann Chemical Company, Anniston, Ala.; Federal Abrasives Company, Anniston; Provident Chemical Works, St. Louis; Iliff-Bruff Chemical Company, Hoopeston, Ill.; and Wilckes, Martin, Wilckes Company, Camden. In addition, it owns Swann Research, Inc., which coordinates the research activities of the various subsidiaries. Products of the Swann organization include food-grade phosphoric acid and phosphates, abrasives, refractory materials, industrial chemicals, textile chemicals, ferro-alloys and lampblack.

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Change in Mundet Memphis Office.

Mundet Cork Corporation, 450 Seventh Avenue, New York City, manufacturers of cork products for all industrial purposes, have announced the appointment of R. H. Hunter as manager of their Memphis, Tenn., branch succeeding Howell E. Adams resigned. Mr. Hunter was formerly connected with the Armstrong Cork and Insulation Company and the York Ohio Ice Machine Company, and the company states that he is exceptionally well fitted to handle all engineering problems pertaining to the use of Mundet "Jointite" cork board, cork pipe covering, cork roof insulation, machinery isolation problems, etc.

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McLeod Supply Houses Handling Mossberg Pressed Steel Line.

The Mossberg Pressed Steel Corporation, Attleboro, Mass., has announced arrangements by which the exclusive sale of their drop wires, beam heads and other miscellaneous textile mill supplies in the South are now being handled by the McLeod companies, consisting of: The Odell Mill Supply Co., Greensboro, N. C.; Greenville Textile Supply Co., Greenville, S. C.; Atlanta Textile Supply Co., Atlanta, Ga.; and the Browning-Roberts Belting Co., Knoxville, Tenn. They state that this arrangement provides a more complete and better service to the mills in the South.

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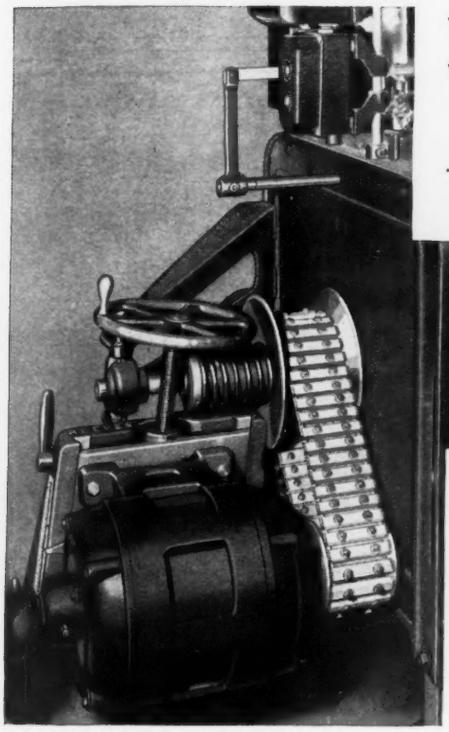
Reliance Promotes R. H. Smith.

Reliance Electric & Engineering Co., Cleveland, Ohio, manufacturers of direct and alternating current motors, have announced the promotion of R. H. Smith of the Boston office to manager of the development engineering department with headquarters in Cleveland. The development engineering department handles all industrial research and application work having to do with new uses and improvements directed toward gaining the most from motor drive. C. E. Robinson has been advanced to fill Mr. Smith's former position in Boston.

REEVES★ announces a remarkable new SPINNING and TWISTER FRAME DRIVE

with AUTOMATIC variable speed control

—giving uniform tension and twist on the yarn at all times



Front view of REEVES Drive, showing motor on vertical sliding base, adjusted for starting speed by handwheel at top. As motor moves down, V-disc pulley on cylinder shaft expands, giving a faster driving speed.

Rear view, showing ratchet actuated by arm leading from traverse shaft of spinning frame. Automatic movement of ratchet gradually moves motor down, increasing speed of bobbins and front rolls.

ADVANTAGES:

1. Uniform tension on yarn from empty to full bobbin.
2. Better quality of yarn—more uniform in size—greater breaking strength.
3. Faster production and larger packages.
4. Instant speed adjustments for different yarn numbers.

● This modern, compact variable-speed drive definitely solves a serious problem that for many years has confronted textile engineers in the operation of ring spinning and twister frames.

With constant-speed drives, there has been no way to maintain an even tension and twist on the yarn. As the diameter of yarn on each bobbin increases, the tension of the yarn *actually decreases,* causing the yarn to have uneven tension, uneven twist and uneven strength.

Speed Increases as Bobbins Fill

With the REEVES Drive, *automatic* variable speed regulation is provided. The proper starting speed of the cylinder (for empty bobbins) and maximum speed (for full bobbins) are established on a convenient speed indicator. Then, as the bobbins gradually fill, the *speed automatically increases* in the proper ratio up to the maximum limit, giving uniform tension on the yarn from empty bobbin to full bobbin. This automatic speed variation, under positive control, insures a better quality of yarn, of more uniform size, twist and strength, as well as faster production. The increased production alone pays for the drive in short time.

This complete drive, with its automatic variable speed facilities, requires no more space than the ordinary constant-speed individual motor drive. Readily installed on frames now in service, for either warp wind or filling wind. The entire mechanism of the drive and the automatic control is quickly understood by any operator. Speed settings for various yarn sizes quickly established. No costly delays!

Proved in Actual Mill Installations

The REEVES Drive has been perfected and approved after an extended period of development and refinement, including exacting tests in a number of mill installations. It is offered with full assurance of efficient, dependable performance—backed by the long-established REEVES reputation.

The mechanical details of this money-saving drive, and its many distinct advantages—together with charted results of exacting tests—are fully described in REEVES Bulletin No. T-200. Send for your copy.

★ REEVES is the leader in the specialized field of speed-control engineering and equipment, being also manufacturer of the well-known REEVES Variable Speed Transmission—more than 60,000 now in use.

REEVES PULLEY COMPANY, Columbus, Indiana

Please send Bulletin T-200, illustrating and describing REEVES Variable Speed Drive for Spinning and Twister Frames.

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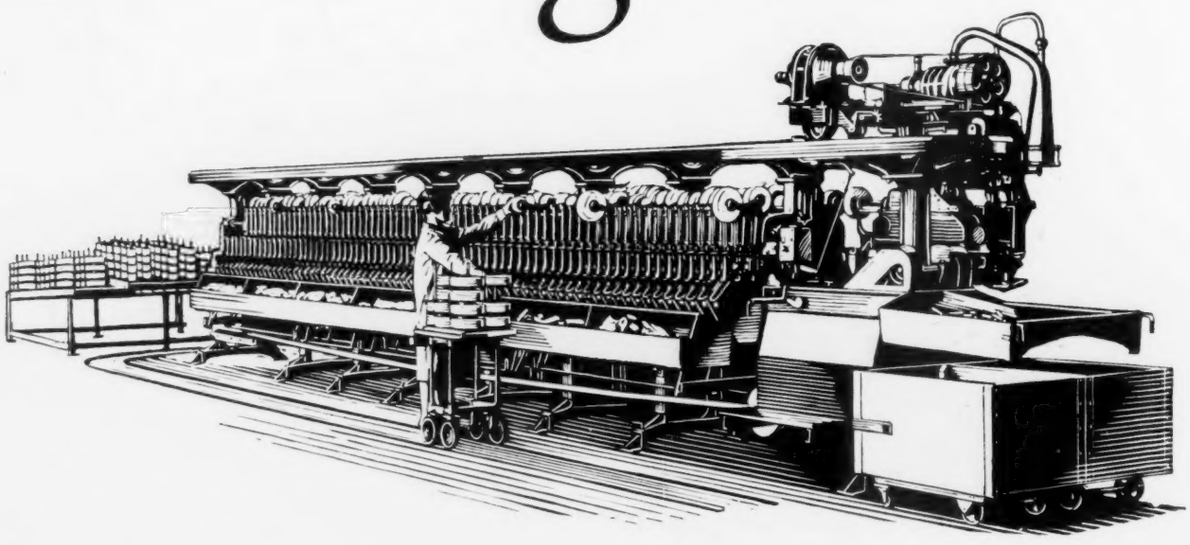
50% greater



Introducing: BARBER-COLMAN'S
NEW IMPROVED AUTOMATIC SPOOLER
and NEW SUPER-SPEED (900 *yds. per min.*) WARPER

Spooler

A redesigned tying mechanism increases the production of the Spooler 50%.

Warper

An entirely new system of creeling coupled with a higher winding speed gives an increased production of 50% over our former High Speed Warper.

production

from the SAME number of MACHINES . . . . . .

Less Machinery for a Given Production at Less Cost

BARBER-COLMAN COMPANY

ROCKFORD, ILLINOIS

FRAMINGHAM, MASSACHUSETTS GREENVILLE, SOUTH CAROLINA

NOTES ABOUT MEN YOU KNOW OR KNOW ABOUT

E. M. Holt, formerly superintendent of Mill No. 1, Erwin Cotton Mills Co., West Durham, N. C., has been made assistant manager of the company. M. R. Harden, formerly superintendent of Mill No. 4 succeeds Mr. Holt at the No. 4 plant. J. L. James was promoted from overseer of spinning to assistant superintendent of the No. 1 mill. Mr. Harden and Mr. James are graduates of the textile school of North Carolina State College.

Brown Mahon, who as reported last month recently resigned as vice-president and assistant treasurer at Judson Mills, Greenville, S. C., has become associated with the sales promotion department of the American Enka Corporation, with headquarters in the company's office at 271 Church St., New York City. He will visit the textile mills in both New England and the South.

Jesse T. Crawford, formerly general superintendent of the Aragon-Baldwin Mills plants at Chester, Rock Hill and Whitmire, S. C., has become superintendent of the company's Whitmire plant.

Kenneth G. Greening, who has been connected with the Houston Textile Mills, Houston, Texas, since 1925, has been made manager of the properties succeeding William A. Mitchell, who recently resigned.

Theo. D. Shelton has resigned as superintendent of the Imperial Cotton Mills, Eatonton, Ga., where he is succeeded by Charles G. Voss.

Blair Parks, formerly overseer of weaving at the Erwin Cotton Mills, Erwin, N. C., has been promoted to superintendent of the company's Mill No. 6, at Durham, N. C.

R. B. King, secretary of the Hampton Company, Easthampton, Mass., has recently been elected president of the Durene Association of America.

T B. Reynolds has succeeded William Keighley as superintendent of the Berryton Mills, Berryton, Ga. Mr. Keighley had been superintendent at Berryton for 16 years. Mr. Reynolds was formerly superintendent of The Margaret Mill, Huntsville, Ala.

A. C. Gregg, formerly superintendent of the Belmont Hosiery Mills, Belmont, N. C., has become superintendent of the Terry Hosiery Co., High Point, N. C.

John L. Graves has been transferred to the Atlanta office of Saco-Lowell Shops. He was formerly connected with the Charlotte office. Fred P. Brooks, for the past five years connected with the Atlanta office, has resigned.

J. W. Trigg has become overseer of weaving, beaming and slashing at the Industrial Cotton Mills, Rock Hill, S. C. He was formerly overseer of weaving at the Eagle & Phenix Mills, Columbus, Ga.

L. A. Elmore has been made assistant superintendent of the Rhodhiss Mills Co., Rhodhiss, N. C. He was formerly cloth room overseer in the No. 2 mill. Clarkson Jones, assistant secretary, is serving also as general superintendent, succeeding J. O. Edwards, who recently resigned.

D. M. Williams has become superintendent of the Smithfield Mills, Inc., Smithfield, N. C. He formerly held a similar position at the Wildan Manufacturing Co., Cherryville, N. C.

Harry C. Coley, for a number of years treasurer of Howard Brothers Mfg. Co., Worcester, Mass., has been made president and general manager of the company, succeeding to the position of the late Herbert Midgely.

R. L. Jackson has been appointed manager of The Alemite Lubricator Company of Charlotte, N. C. He was formerly connected with the Baltimore branch of Alemite, covering Virginia and Maryland. John L. Payne, formerly manager of The Alemite Lubricator Company of Charlotte, is now associated with William C. Robinson & Sons, at their Charlotte branch.

A. S. Neuburger, Grand Central Terminal Bldg., New York City, has assumed, with his organization, the sole selling agency for Van Raalte Company's "Niagara Maid" tricots and Milanese fabrics, particularly for the underwear trade. Max Wohl, formerly of Elk Mills, is in charge of sales.

L. R. Boyer has been appointed to the home office sales staff of the Toledo Scale Co., Toledo, Ohio. Mr. Boyer is specializing in the sales of industrial type scales.

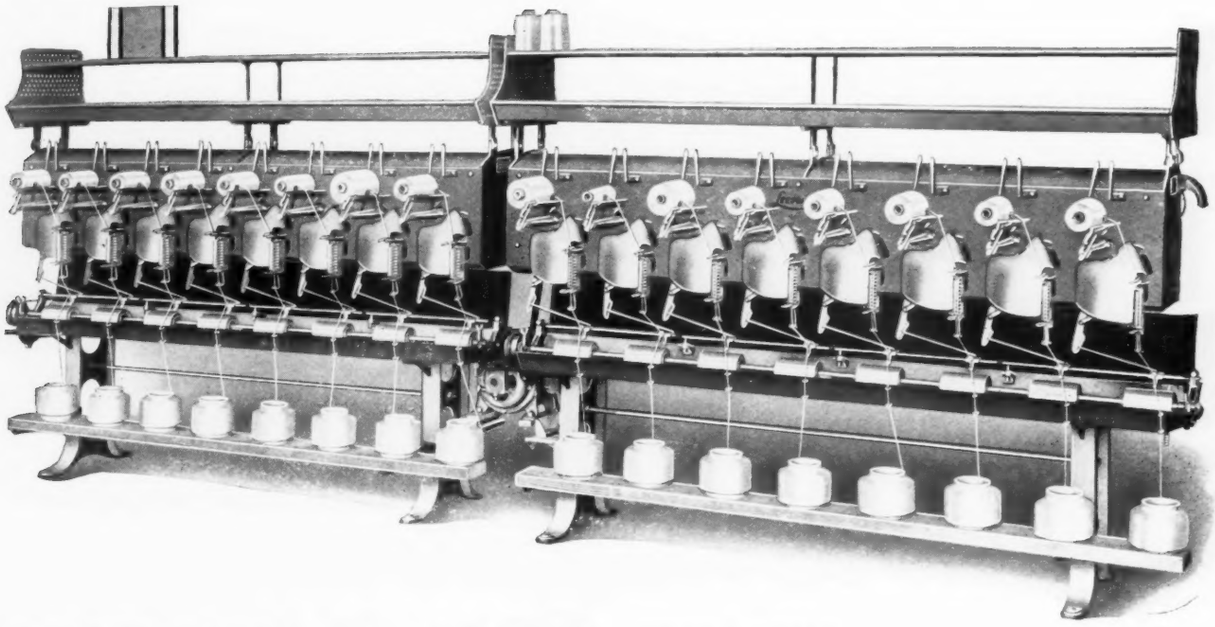
Obituary.

Herbert Midgley, president and general manager of Howard Brothers Mfg. Co., Worcester, Mass., died suddenly while attending a meeting of the Worcester Rotary Club, on April 14th. He was one of the outstanding figures in the card clothing industry, and enjoyed a wide acquaintance and popularity among the executives in the textile industry. Mr. Midgley was born in Rockdale, England, August 27, 1867; when he was 15 his family removed to America, and Herbert, with his father, became connected with the Lowell Card Clothing Co. In 1884 he moved to Worcester, and entered the employ of Mason & Farnsworth, card clothing manufacturers. Three years later he went to Leicester, with the card clothing factory of Bisco & Denny. Later he returned to Worcester as a card machine operator, later being made superintendent. In 1916, upon the death of A. H. Howard, he was elected president.

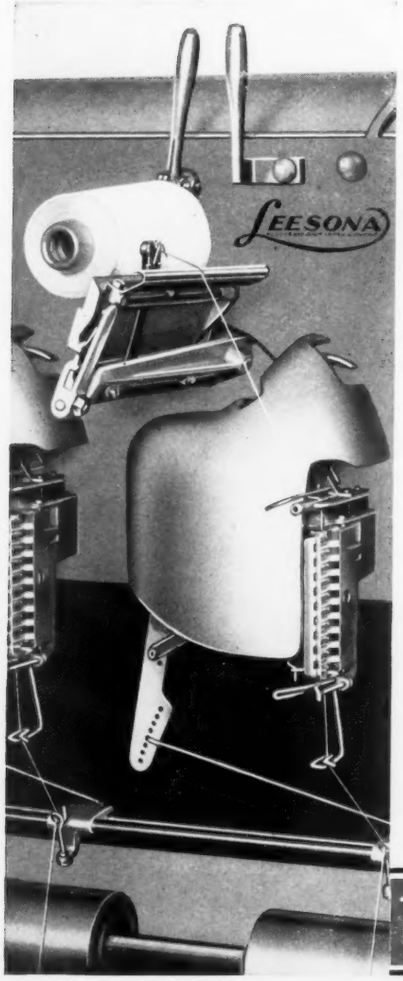
Roy L. Wood, superintendent of the Watts Mills, Laurens, S. C., was killed in an automobile accident on Saturday, April 30th, near Waycross, Ga., while on the way to Florida for a fishing trip.

Arthur J. Draper, 58, of Charlotte, N. C., passed away on April 26th at his home following an extended illness. Mr. Draper was for a number of years one of the prominent cotton manufacturers of the South. He was a son of the late General and Mrs. William F. Draper, of Massachusetts, and removed to Charlotte about 25 years ago, having previously been connected with the Pell City (Ala.) Cotton Mills. For a number of years he was president of the Chadwick - Hoskins Company, with plants at Charlotte and Pineville, and served terms as president of the American Cotton Manufacturers Association, the Cotton Manufacturers Association of North Carolina, and as a member of the National Council of Cotton Manufacturers.

L. A. Kiser, president of the Sadie Cotton Mills, Kings Mountain, N. C., died on May 2nd at a Charlotte hospital, following an illness of pneumonia.



WINDING QUALITY CONES WITHOUT OIL STAINS



IN the winding of Rayon yarn for delivery to knitting machines or warp creels it is essential that those parts of the machine in contact with the yarn should be free from oil.

The design of the No. 30 Cone Winder meets this requirement fully, as practically all of the working parts are enclosed.

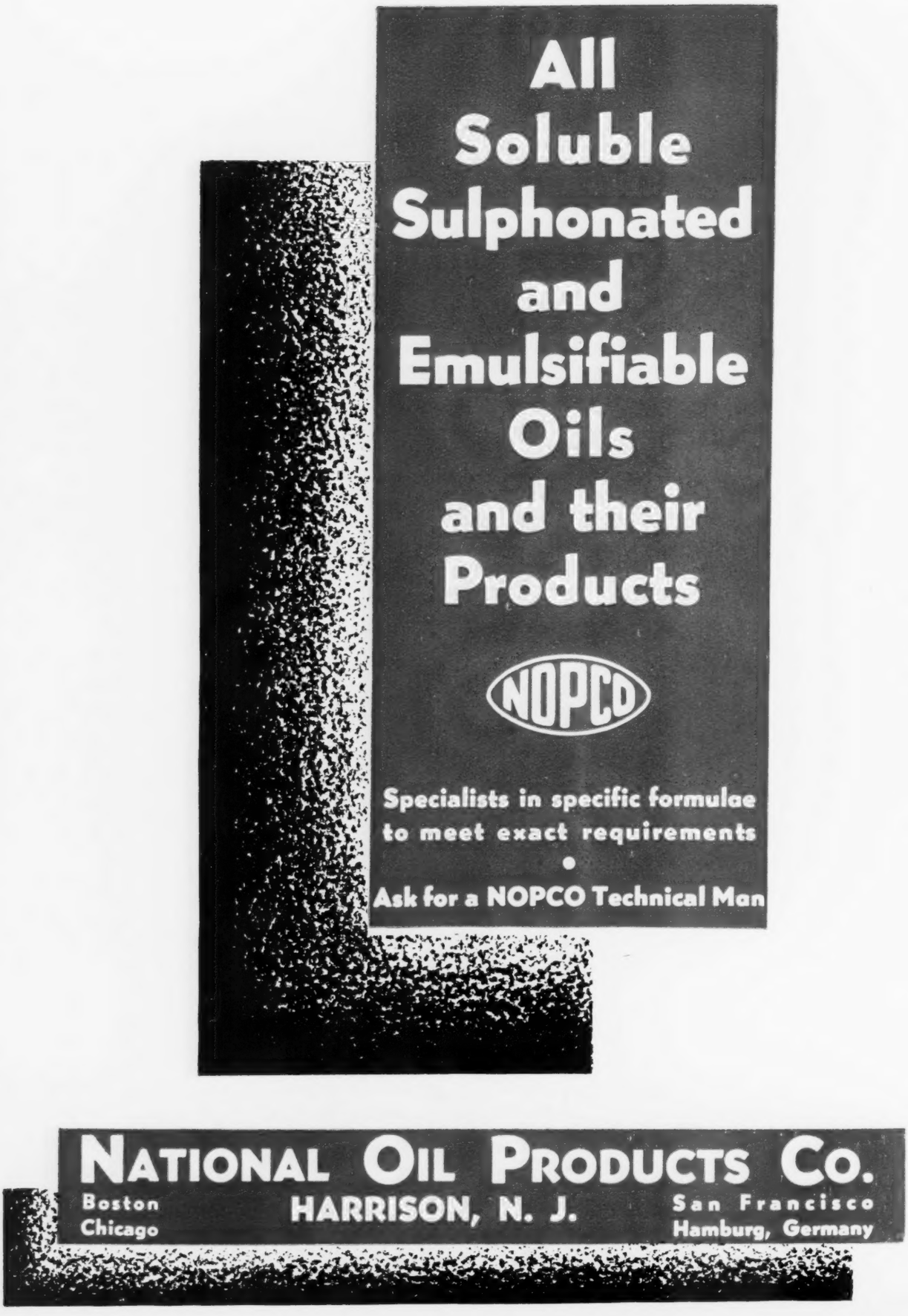
The arrangement of the tension structure is such that a cone of required density is produced with a very slight drag on the yarn.

This combination of mechanical elements results in a production of cones of uniform density and with the least possible stress on the yarn.

UNIVERSAL WINDING COMPANY
BOSTON

330

UNIVERSAL WINDERS


All
Soluble
Sulphonated
and
Emulsifiable
Oils
and their
Products
NOPCO
Specialists in specific formulae
to meet exact requirements
•
Ask for a NOPCO Technical Man
NATIONAL OIL PRODUCTS CO.
Boston
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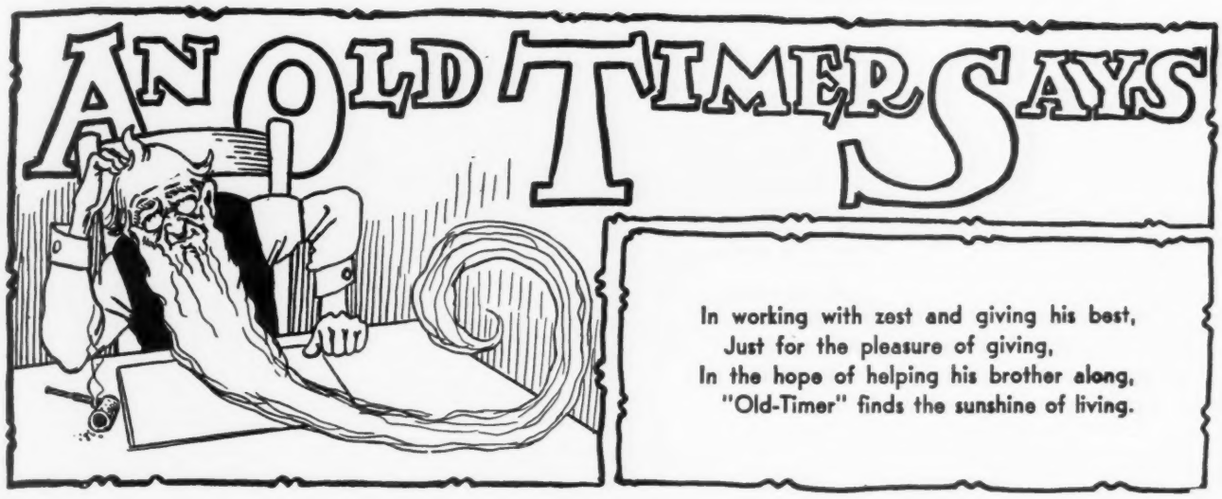

AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

The Story of Old Timer's Methods of Working and Management

Part Four—Continued from April Issue

WE resume here the series which was interrupted in the May issue. This is the fourth installment; the first appeared in February, the second in March, and the third in April. If you are interested in securing copies of the preceding installments, we shall be glad to tell you how you may do so.

In continuing here their discussion of maintenance as applied in the card room, Old-Timer and Jim provide more food for thought. Incidentally, Jim "takes the floor" and does most of the talking this time . . . . . .

(Note: Since this series is written in conversational style, it should be borne in mind that those paragraphs in *italics* represent Jim's part of the conversation, and those in regular type are Old-Timer's part except where indicated otherwise.)

(Continued from April Issue.)

The examination of waste, as recorded in Fig. 10, is done the same way as explained for picker room (April issue). The overseer simply notifies the man who takes waste out from under cards not to haul it away next time he takes it out, but leave the waste at each card. The overseer and second-hand and grinder can then walk up and down the alleys of 200 cards in a few minutes. At which time the overseer can point out which cards he wishes the grinder to work on. The overseer takes the number of these cards and in a few days when the grinder has had time to do the work the overseer only has to inspect the cards he has designated by number and the job is finished until the next inspection period.

On this same waste card appears an inspection of flat strips. This is done by taking the strip lap roller off of the cards and letting the strips pile down on the doffer casing.

After the cards have run a few minutes you can easily see the ones needing attention.

Just think, JIM, what good information this is after a mill has several years of it. You can tell just what supplies are best for that particular mill—just what they cost—which firm does the best work and numerous other things which all go to make a more valuable overseer or superintendent.

We have always adopted the plan of never going

Card Room

Waste from cards 8/17/29 11/11/29
1/18/30 2/10/30 6/14/30 6/22/30
10/29/30 1/10/32 " "

FIG. 10

by what any overseer or superintendent *thinks* about a supply of any kind. We keep the records and they tell their own tale, and you would be surprised, old friend, how badly you can get fooled on your judgment sometimes.

Only today a man showed me a record we started five years ago that was just opposite to what my judgment told me it would be. It was a record of speeds by different kinds of belts. On these particular machines I was so sure that a certain type belt would give

VATROLITE
SODIUM HYDROSULPHITE

. . Dyers find a supreme quality SODIUM HYDROSULPHITE . . the universally recognized Royce standard of chemical perfection.

By a complex system of controlled production, the essential influences of VATROLITE are introduced and uniformly maintained on a volume scale . . an output constantly increasing by virtue of rapid trade adoption.

VATROLITE *looks* its part on sight! Proof of adaptability comes with the desirable effects of Vat Color reduction and Stripping . . for which sodium hydrosulphite is commonly specified.

VATROLITE is packaged in specially made, moisture-proof, tin-lined containers of 50, 100 and 250 lb. volume.

Why not arrange for a working sample?

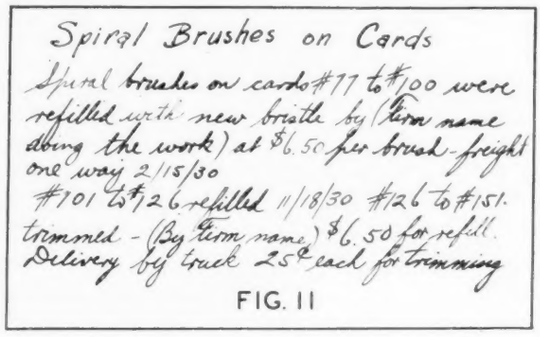
ROYCE CHEMICAL COMPANY
Manufacturing Chemists
CARLTON HILL · NEW JERSEY
NEW ENGLAND REPRESENTATIVES: RICHARD HAWORTH, Inc., 25 FOUNTAIN STREET, PROVIDENCE, R. I.

Made by the originators of DISCOLITE and VELVORAY

better results than another type. Well, I would have bet two to one on it and considered it a good bet. Now the record is five years old and I have added to my store of experience, that dearest of all teachers.

Yeah, OLD-TIMER, *you have long ago taught me not to be so darn sure of anything. Prove it by unbiased, accurate records and then you can back up what you say with the facts.*

Here is an example of it: Along comes a salesman who says he has a canvas belt for card comb drives which will outlast anything, cost less and then turn to a ten dollar bill, or something. Well, the darn thing sure looks good, and, naturally, we want to favor


Spiral Brushes on Cards

Spiral brushes on cards #77 to #100 were refilled with new bristle by (Firm name doing the work) at $6.50 per brush - freight one way 2/15/30

#101 to #126 refilled 11/18/30 #126 to #151 trimmed - (By firm name) $6.50 for refill. Delivery by truck 25¢ each for trimming

FIG. 11

canvas if we can, so we buy 12 short and 12 long ones for card comb bands.

Here is what the record shows: Put on cards No. 12 to No. 24 8/14/25. All shorts off 9/2/26—8 long off 11/1/26.

Well, this is not so hot in comparison with what we are using, so next time Mr. Salesman shows up we are prepared to talk intelligently to him.

Here is another record card that shows: Production gear changed from 27 to 28, on 10/28/26. The old doffer speed was 9⅓ r.p.m.; the new speed was 9⅔ r.p.m. The old production was 10¾ pounds per hour; the new production was 11 pounds per hour.

In other words, we ran into a better grade of cotton and felt we could afford to go up a little on the card production, but we always make a record of the

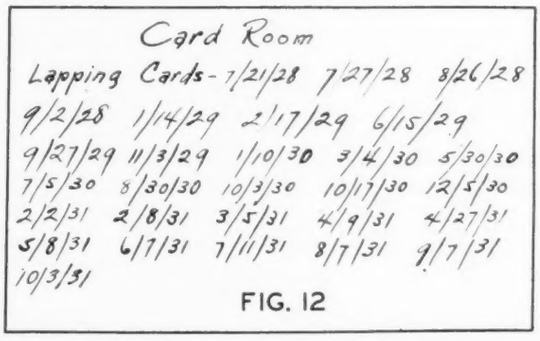

Card Room

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FIG. 12

change so we will know about when it gets into the spinning room.

Say, JIM, how long does it take a change in your card room to get into your spinning?

Never mind trying to trip me up again, OLD-TIMER, *just go on with your rat killing there. I am listening to all you say and have got one ear stopped up so it can't get out.*

Okeh, JIM! Here's a good one. Say, do you remember that time you and I went into the card room and tried to lay some laps down on the cards and you also remember, I guess, that I won a bet off of you that you never did pay, you old geaser, you? Anyway, here is the record card, in Fig. 12.

I have copied this whole card of dates to let you see that this is a very important item and that it *has* had the personal attention which the overseer is supposed to give it.

I claim, JIM, that lapping cards . . .

Hold on, OLD-TIMER. *I know what you claim, and you taught me a lesson on lapping cards, so light up your old pipe and let me tell it . . .* Editor's note: JIM now doing the talking:

OLD-TIMER took charge of the card room where I was grinding, and the first orders I got which sounded like they came from the new boss were to not start up any more cards after I had finished grinding them, but I must go and report to the overseer that the card was ready to be inspected. In a few minutes after I got my orders I looked up and here came the other grinder. He asked if I had received the same orders he had and I replied, "Yes, what you got to say about it?"

"Well," he says, "looks to me like that overseer's going to have his hands full, that is, if he expects to do any overseeing, and what are we going to do about these front stands? If we set the flats down to the gauge, you know it will face the clothing, and if we don't, that man is going to think we don't know how to set them, so there you are."

(For the reader's information, the cards had been running long enough for the links which hold the flats together to become worn. This increased the distance between each flat; the back of each flat acting as one tooth of a gear which meshes with the gear or sprocket that pulls the flats. The increased distance between the flats caused the tooth on the driving sprocket to strike too high up on the flat, thereby oftentimes springing the flat and causing the clothing to face by striking the cylinder clothing.)

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"That's a pretty good setting on this front stand with these chains worn like they are," he said. "Can you set them all down like this, or do you have to back some of them off to prevent facing your clothing?"

"Yes sir, we do have to back some of them off."

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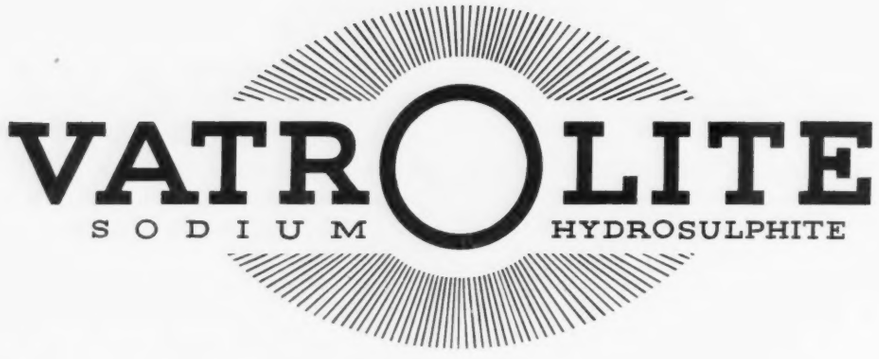
"I am glad to see you are willing to tell the truth, but I also see you have tried to fool me. Now suppose we have an understanding. You boys know you are not setting these cards like they should be set. I know the reason why and I am not blaming you for it, but I *am* going to blame you for it if you try to hide things from me. I have come here to try to run this room. I cannot run it without your help—your co-operation.



. . Dyers find a supreme quality SODIUM HYDROSULPHITE . . the universally recognized Royce standard of chemical perfection.

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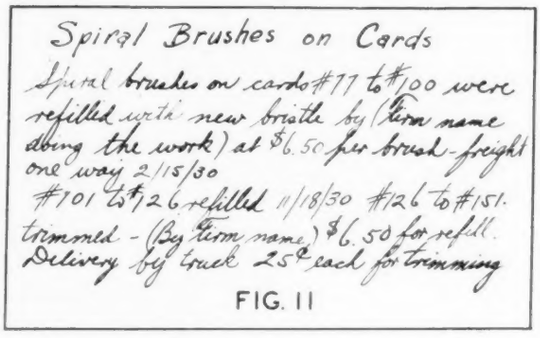
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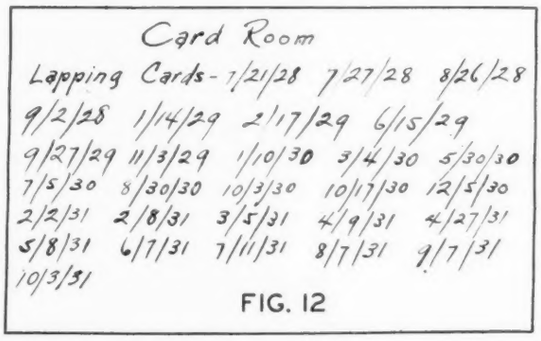
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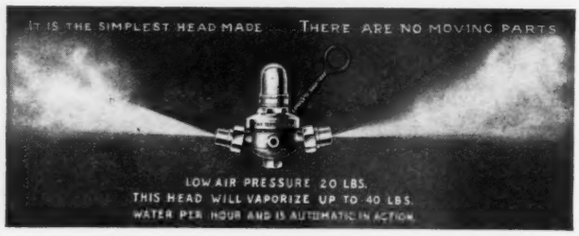
PROVED---

RIHCO has combined simplicity with low operating cost in this humidifier Head.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LOW AIR PRESSURE 20 LBS.
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"Get that out of your mind; I am here to work *with* you. If you will fall in line and co-operate, we will get along fine; if you don't, if you get a chip on your shoulder and think no one knows anything about a card but you, then you will get jacked up sure enough. I hope I have made myself clear. I have nothing to hide from you and you *must not* have anything to hide from me. Go on now and back off that front stand like you would have done. Start up the card and I will be back to see you when I get time."

Darn! I felt like a million dollars. If the new boss was going to be that fair, I, for one, made up my mind to show him I could co-operate just as much as he could. Still, that did not fix those old cards so we could set them, and naturally the other grinder and I wondered what would be the next move. As for him getting new chains and new sprockets, we had been there long enough to know that was out of the question.

In a few days he brought the master mechanic into the card room and they went to a card and talked a long time. He finally motioned to me and told me to take out the sprocket and take it to the machine shop.

The master mechanic took a piece of high pressure steam pipe and after turning it out on the inside to just fit tight over the disk, which is the part of the sprocket the ends of the flats rest on, he put four dowel pins spaced evenly around the disk to hold the thin piece of pipe securely and then turned the outside down in the lathe.

This increased the size of the disk about 3/16-inch. Next he cut the sides of the teeth of the sprocket off to where they almost came to a point. The teeth of the sprocket were originally what we called round nosed.

Well, holy smoke! we put that sprocket back in the card, took one flat out of the chain and set the front stand down to the gauge and she was absolutely okeh. The clothing did not face, and we were the proudest bunch you ever saw. Needless to say, we had all the card sprockets fixed as fast as the machine shop could do the work. Editor's note: JIM'S account ends here.

JIM, you are like the Negro preacher who explained that the best way he had found to hold his audience was to take a text and then stay as far away from it as possible.

What do you mean—stay away from it as far as possible?

Well, I started to explain about lapping cards, and here you have wandered all around talking about grinding.

Sure, but, OLD-TIMER, *you know the grinding was the first thing you started us on, and naturally my mind went back to that, and now I will tell the fellows what a fool you made of us about lapping the cards:* JIM talking again:

First thing I noticed was the new boss and the second hand going along where the card hands would lay down a lap, and taking some of their sliver out of the can to weigh it. Then I saw the second hand laying a lap down and they took out more sliver and weighed it. Next day the second hand asked me if I knew how to lay a lap down on a card. Well, I thought he had some kind of a joke up his sleeve, but I told him I ran a set of cards three years and if there was anything about laying a lap down that I didn't know I would like to learn what it was.

"All right," he said, "let me see you lay a lap on these four cards. Just take that piece of lap off, and lay down the full one."

Boys, I sure took my time and came as near tying each fiber of the new lap to the old one as I possibly could. Mr. Second-hand says: "All right, JIM, let's see what kind of a job you have done," and he walks around to the front and takes some sliver out of each can. "Come on," he says, "let's go weigh it." I could see he was smiling a little all the time, but I hadn't seen the joke yet.

"You know what the sliver is supposed to weigh, don't you, JIM?"

"Sure! Fifty grains is what it has been for several years."

"Okeh," he says, "here are the scales, suppose you weigh it."

Well, confound if some of my sliver didn't weigh as low as 35 grains and some went as high as 65.

"What have you done to those scales?" I asked.

"Not a thing, JIM," he says. "Take the sliver up to the spinning room and weigh it on those scales if you like."

Then I went back and laid some more laps down and made a little better showing, but if any man had wanted to make a bet with me that I could not lay a lap down without having 20 grains, that is, from 40 to 60 grains on a 50-grain sliver—oh well, I would have bet him the shirt off my back, and now I see that I would have been going around as naked as a jay bird.

(Now, Mr. Reader, suppose you try it.)

"Well, by heck," I asked Mr. Second-hand, "can *you* lay a lap down that will not show a wide variation?"

"No, JIM, I'm frank to tell you, I can't".

"How about the new boss? I guess he can show us how, after he made such a dandy job showing us how to set cards".

"No, again, JIM. He says he can't do it either, and has never seen anyone who could, but what made me feel so blamed cheap was, I thought *I* could, and here we have been in the card room all of our lives and didn't know it".

(Editor's Note: The fifth installment of this series will appear in an early issue. If you wish copies of the preceding three sections, we shall be glad to tell you how you can get them.)

"The Wonder Book of Rubber."

Portraying the romance of the rubber industry, and the part played in its development by the Goodrich Company, manufacturers of more than 32,000 articles of rubber, The B. F. Goodrich Company has issued its latest publication, "The Wonder Book of Rubber".

After relating discovery of rubber by South American Indians, and tracing slow growth of its use in earlier years, the book turns to description of manufacturing processes. It gives brief, but clear explanation of construction of tires, footwear, rubber sundries, mechanical goods and other products covering the range of American industry.

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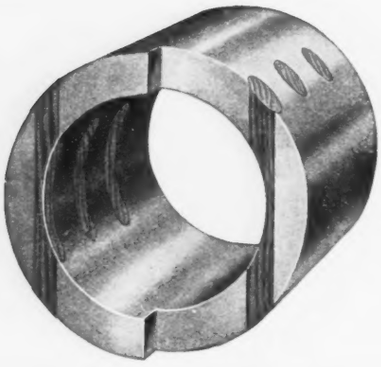

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HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all Varieties of Mill Subjects

Wants Discussion on Round and Square Point Travelers.

Which do you prefer, and why? Come on, you spinners, and let us have your experiences.

EDITOR COTTON:

During a recent spinners' meeting the question was raised whether round point or square point travelers should be used on warp, on filling, on coarse numbers, and on fine numbers. To the writer's way of thinking this question was not answered conclusively at the meeting mentioned, and discussion along this line in the "HOW OTHER MEN MANAGE" department would undoubtedly be helpful.

In fact, a thorough treatment of traveler styles, shapes, problems, and performances would be valuable, and it is hoped that some experienced traveler manufacturer and engineer will come to the rescue.

My experience has been on weaving and mercerizing yarns from 20s to 80s, and I want to state that I am a believer in round point travelers for that range of numbers.

My reason for favoring the round point traveler is that, in my experience, a heavier round point than square point traveler is required to give the same tension on the yarn. That means friction has been eliminated and the traveler is acting more as a flexible tension, guide, and weight and not so much as a brake. It seems to me that rings should give better service when round point travelers are used, but about that I can't speak from experience.

The reason, as I see it, that a heavier round than square point is required for equal tension, is that the yarn passing under one side of the traveler and out the other causes the traveler to tilt in running. The round point traveler is cut or shaped so that it presents a good bearing surface to the ring, while the tilt of a square point traveler causes one corner of the "point" to dig into the ring. An examination of worn square point travelers will reveal that they have worn to the general shape of the round point, and if this be the shape into which they must be changed in actual operation, then why not start them off with rounded points?

Of course I know the term "round point" is somewhat misleading, and that the "round-pointed" traveler is really "trowel-pointed", but the fact remains that when tilted in running the round point traveler does not present a sharp corner to the ring.

The objection is raised against round points that they un-thread more easily than square points in doffing. The shape of the round point is such that it stands to reason an end can more easily work by it when the traveler is at rest and the yarn is slack so that the twist in it has a tendency to make it "crawl". It is my opinion that most of this un-threading trouble is caused by using travelers with circles much larger than they should be. In fact, I believe the use of travelers with too large circles is the most common fault with overseers of spinning.

Which shows how easy it is to go beyond your subject in talking about this traveler problem.

I've tried to tell you why I'm a round point man. Let's hear from some more round point men and from some square point men, and don't forget to give your "whys".

CONTRIBUTOR No. 6072.

◆ ◆

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or leters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

Don't Over-Work the Card.

EDITOR COTTON:

There are some overseers and superintendents who expect too much of a card. As everybody knows, cotton is supposed to be carded before being spun, but good carding doesn't always mean good spinning.

The cotton might not be properly opened. Of course, each mill has its own ideas of opening and feeding in the cotton, etc. The picker must do its duty, such as cleaning and making as nearly a uniform lap as possible. If not, then the card cannot do its duty. Here is where a lot of overseers blame the card for bad work, when it is not the card, but the picker. A card can't do all of the cleaning.

Let any mill man take notice all over the mill. There are a lot of things done such as cleaning down overhead. Now, this lint has to go down on the work, and unless it is taken off frequently it is put on the card, and "poor carding" is the result.

I know of a complaint which a mill received from a large buyer of its product. The buyer said the cause was poor carding, and that if it was not improved, to stop shipments, but an investigation showed that it was something else—it was slack bands on the twister.

Let's treat the card fairly. Some mills overhaul

the entire mill except the cards; they seem to think that the cards can take care of their own needs. I think a card should be leveled and lined the same as any other machine.

CONTRIBUTOR NO. 6077.

Finds Using Only Male Help at Night on Spinning to Be Successful.

A mill report on results after eliminating women from night shift; also on automatic spooling and high speed warping.

EDITOR COTTON:

Much has been said about the operation of the spinning department with all male help on the night shift. Some have had good results, others have not fared so well. Some men have even said that it was impossible to get good results under this system. However, it can be done and is being done. One mill in particular is getting good results under this system. They get about the same production on an average as the day shift and have succeeded in getting less waste made at night than in the day run. This mill runs from 6s to 17s filling, and from 8s to 18s warp. The spinners run 12 sides of 102 spindles each on warp and from 6 to 8 sides of 96 spindles each on filling, according to the numbers run. They do all of the cleaning up, the same as the day shift.

This is not such good running work. On a test made recently at night on ends down per thousand spindles per hour the warp had 56 ends down and the filling had 83 ends down, making an average of 69.5 ends down per 1,000 spindles per hour. This will show that they have not had the advantage of good running work to help them put over this system.

A considerable saving is made by using less help at night. That is, aside from spinners, doffers, section men and roving haulers. The day shift uses one overseer, one second hand, four overhaulers, one time keeper, one head doffer, one bander, one bobbin boy, two spindle pickers and eight sweepers. While the night shift uses only one second hand, one bander, and one sweeper. Leaving out the four overhaulers, this makes 13 less hands used at night.

A study of the table, Fig. 1, will show how the night run compares with the day run. It will be noticed that the warp does not stay as close to the day production as the filling. This is caused by the fact that most of the night run is on the finer numbers while the day run has the advantage of the coarser numbers to run the average up. Even at that there is not so much difference. The filling run, however, gives the best indication of the results obtained. The spinning ball waste is all that is listed as this mill does not allow any roving waste to be made; all rov-

TABLE 1—Comparison of night shift using male help, with regular day run.

	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Frames run on warp	132	42	132	47	132	47	132	47	132	47
Section men	3	1	3	1	3	1	3	1	3	1
Spinners	22	7	22	8	22	8	22	8	22	8
Doffers	8	3	8	3	8	3	8	3	8	3
Roving haulers	3	1	3	1	3	1	3	1	3	1
Production	13,416	3,960	13,833	4,380	13,515	4,416	13,492	4,272	13,326	4,116
Production per frame	101.56	94.28	104.56	93.19	102.31	93.95	102.21	90.84	100.92	87.57
Production per frame per hour	10.15	8.57	10.45	8.47	10.23	8.54	10.22	8.25	10.09	7.96
Frames run on filling	68	63	68	66	68	67	68	66	68	66
Section men	3	2	3	2	3	2	3	2	3	2
Spinners	18	17	18	18	18	18	18	18	18	18
Doffers	15	14	15	15	15	16	15	15	15	15
Roving haulers	2	2	2	2	2	2	2	2	2	2
Production	12,180	11,570	11,790	12,600	11,490	12,480	11,520	12,480	11,610	12,150
Production per frame	179.11	183.65	173.38	190.90	168.96	186.26	169.41	185.57	170.73	184.09
Production per frame per hour	17.91	16.69	17.33	17.35	16.89	16.93	16.94	16.87	17.07	16.73
Total spinning ball waste	220	60	236	71	219	73	244	54	233	51

ing must be run off the bobbin before a full bobbin is set in. The ends down from this cause were not counted in making the test of ends down per thousand spindles per hour. This method of creeling requires all the more work by the spinners, however.

This department is run entirely by young men, overseer or rather second hand, and all. The only men in it out of their 20's are sweepers and haulers. It was found that good results could not be obtained by working older men; they could spin very well but could not get around to the cleaning up, etc., like the younger men. I think the main reason for these results lies right here.

There has been so far no trouble in keeping plenty of help and at no time has the schedules run had to be curtailed because of the shortage of spinners and there has been no call for any of the women to come back and help out at night because of the shortage. In fact, there have been no women in the mill at night since this system was put into effect a little over a year ago.

The figures used for compiling the table given were taken from the daily report for the department and were picked at random. They should give a fair representation of what is being done.

It has been no easy task to build up an organization that would obtain such results but it has been done, and has been running smoothly for sometime, and gives all evidences of doing so for a long time to come.

The same thing was done with the warp preparation department, where we have Barber-Colman automatic spoolers and high speed warpers. We have had equal if not better success in operating the spoolers and warpers at night with men. This mill is equipped with three Barber-Colman high speed warpers and three automatic spoolers. The spoolers run at a speed of 1,200 yards per minute and each spooler hand runs 60 spindles or three hands to one spooler of 180 spindles. Only one spooler is run at night, that is only one at a time; sometimes we run one part of a night and another the rest. They average running a third of the warp spinning at night and the night spoolers not only run up this yarn but catch up with it and run what yarn the day shift has failed to run up. In other words, they keep up their part and help the day shift to keep up theirs. One-third of the spinning just will not keep them in enough yarn to run with and as the day shift always has a good many boxes left that they fail to run up they catch it up for them.

I have watched these boys run these spoolers many times and have my first time to see the traveling head get to a spindle before they have placed a bobbin of yarn on it, and the traveler is set to run around and around, that is, it makes no pause at the end for the spoolers to catch up. The spoolers are paid by the hundred cheeses doffed and the total for the machine divided equally between the three hands. This keeps them all up and after it, and if one lags behind the other two will soon see that he keeps up or ask to have him moved to some other job.

The table in Fig. 2 (page 75) speaks for itself and shows that the night run is beating the day run some-

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	Day	Night	Day	Night	Day	Night	Day	Night	Day	Night
Spoolers	10	3	11	3	11	3	10	3	11	3
Yarn men	3	1	2	1	2	1	3	1	3	1
Warpers	3	1	3	1	3	1	3	1	3	1
Creelers	4	1	4	1	4	1	4	1	4	1
Re-winders (tail-end machine)	1	1	1	1	1	1	1	1	1	1
Beam men	2	1	2	1	2	2	2	1	2	1
No. Full Cheeses	9,180	3,204	8,874	3,312	8,766	3,006	8,460	3,222	7,344	3,132
Lb. Prod. (1.40 lb. per cheese)	12,750	4,486	12,424	4,637	12,279	4,208	11,487	4,510	12,575	4,385
Average per spooler	4,250	4,486	4,141	4,637	4,092	4,208	3,949	4,510	4,191	4,385

TABLE 2—The night shift is exclusively male help.

times by a considerable margin. Of the five nights given, the least gain over the day run was 116 pounds, while the greatest was 561 pounds, which is quite a little bit better. It seems that they would do well to operate the day shift with male help in this department.

I found available only one day's report of the warpers. However, I was assured by the overseer that this one day's report was well up to the average and could be taken as a fair indication of what was being done. On the day's run, for all three of the warpers, there were 24 beams taken off. On the following night's run the night operator took off 12 beams from one warper, giving a gain of four beams over the average run of the day shift. The warps run at night are all on the finer numbers. None of the coarser numbers are ever run at night, causing the night man to have to put the maximum number of yards on his beams, while the day shift has the advantage of the fewer number of yards on the beam of the coarser numbers to help pull up its average. The night that I obtained this information from the overseer of this department (during the stop for lunch, with the night half gone) he told me that his warper tender had taken off his eighth beam just at lunch time and was in hopes of getting a like number after supper. He did not ask me to take his word for it, but showed me the reports to prove it.

Regardless of the results obtained in other places, the operation of the night shift with all male help at this place is a success. The men and boys run the women and girls a close race, and, as I have shown, in some instances beat them at their own game. What can be done at one place should be possible at another and I feel sure that any mill can be run at night with male help and run successfully too. It was no easy task to reorganize this job, but some saw the light and went ahead in spite of doubt and dire warning and today, or rather tonight, we have a smooth-running night department which gives as good results as most any of them.

If I were called upon to state what I thought was the main reason for the success at this mill I would say it was the fact that they took a bunch of boys and very young men, many of them fresh from the country and others just out of school—none of them with much or any experience in the mill—trained them thoroughly for their jobs and put them on them. They have never expressed a doubt but that they could run their job, and the boys have not failed yet. You know that if you could make one feel that he can do a thing the job is half done before he starts, and this is my choice of the reason for the success of this system at our mill.

CONTRIBUTOR NO. 6086.

More About Warps Sticking to Slasher Cylinders.

EDITOR COTTON:

I have been noticing considerable discussion lately in COTTON regarding a question asked some time ago by "CONTRIBUTOR NO. 4944", as to what causes yarn to stick to slasher cylinders. The latest appeared on page 79 of the April issue.

Having had several years' experience in slashing and weaving, I wish to add a few of my experiences to what has already been said, hoping that I might be of help to some one.

One of the most common causes of warps sticking to the slasher cylinders, according to my way of thinking, is that the size is not prepared right—meaning that the right amount of softener is not being used, and probably not the right kind. Also, the size may not have been cooked thoroughly.

However, assuming that the proper ingredients are used, and that the cooking is done right, let's look a little further and see what we can find. Is the cylinder heated to the right temperature, or do we just think it is? Are the traps from the cylinder taking out water as fast as it condenses, or do they allow one or two inches of water to accumulate before opening? If so, no matter if the cylinder does show the proper heat, the surface will not be dry, as it should be and will naturally stick.

And what about the squeeze rolls? Are they

heavy enough to force off all surplus size, or is the yarn carrying a lot of size just plaited on the outside? In the April issue, "JACK (TEXAS)" said he found a difference in the water at two mills was the cause of the trouble one time. That's logical. But what about sticking occurring on one slasher at a mill while the others, running the same size and the same yarn, were not causing any trouble at all? This is what I had. I had four slashers running at one mill, and one of them gave all kinds of trouble with sticking; the other three gave none at all on the same goods. My trouble proved to be in the controls not working properly, even though to all appearances they were all right.

In the April number, "CONTRIBUTOR No. 4950" suggests paraffin wax. That might do if he could get by with it, but some goods have to be free from wax in any form in order to get the proper finish. At the present we could not sell a yard of goods from our mill if wax was present in the size.

In conclusion, I wish to say that after all is said and done—if the size formula is right and it is cooked right—there is no need of putting extra materials in the size to overcome the sticking. The cylinders should be kept hot and dry; the slashers must be run at a speed that is not too high.

CONTRIBUTOR No. 6074.

Change Gears for Slashers.

EDITOR COTTON:

This is in response to your contributor who asked the following questions:

"What is the proper method of determining the correct size change gear for driving the cylinders of a positively driven slasher? Should the surface speed of the large cylinder be greater or less than that of the small cylinder?"

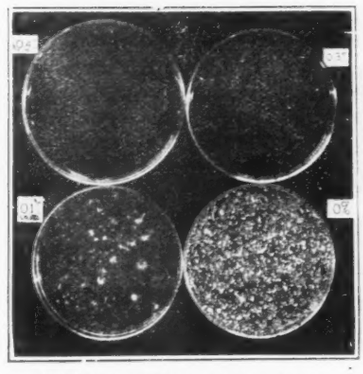
The sketch on the next page of the slasher gearing may help to answer these questions. Assuming that the slasher is standard, the cylinders would be: large cylinder, 7-foot; small cylinder, 5-foot. The small cylinder turns faster than the large one in the ratio of about 14 to 10; in other words it takes 14 complete turns of the pinion gear to make one turn of the large cylinder, and 10 turns of the pinion to make one turn of the small cylinder—however, the surface speed is the same.

The large cylinder has 224 teeth on the gear which is on the end of the cylinder. The small cylinder has 160 teeth. Each of the two pinion gears has 16 teeth, and these pinion gears are geared into the cylinder teeth.

On the other end of the shaft carrying each pinion gear there is a change gear, on which gears of 67, 68, 69 or 70 teeth may be used.

On the drive shaft, for each cylinder, there is a bevel gear of 27 teeth, driving into a 27-tooth bevel gear which is on the same shaft with a 50-tooth regular gear which meshes into the change gear. Slashers of course are always rigged up, and no gears are ever changed except the change gear.

I might say in further answer that the only time I ever had to change a gear on the slasher was on a



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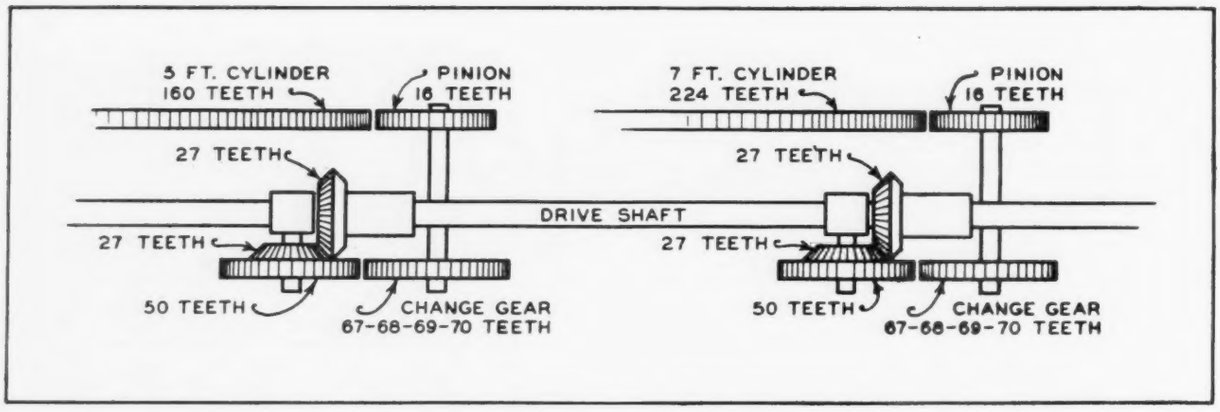

new one. The yarn was too tight on the front, so I had to get the cylinders speeded up a trifle; one tooth on the change only alters the cylinder speed about 2/10 of a revolution per minute.

The only way I know to determine a change of gears is the tension of the yarn at the back and at the front; at the back after the yarn leaves the squeeze roll, and at the front at the tension roll. A slight difference of tension is controlled with the tension cloth (in front); if too tight, take off a layer of cloth, and if too loose, add a layer.

A change gear is hardly, if ever used, but should a man change from coarse to fine yarn, or vice versa, he would then no doubt have to alter the speed of the cylinders, and he would have to determine the amount of speed to be cut or added. I do not know of any set rule to get this, and it is possible there is such a rule; if you find one, please advise me, as I would like to know it as a matter of interest, though I do not now believe a rule could be used with certainty.

The only reason that would cause me to change a gear would be if I found the yarn snapping out front or back, or if there was a tendency for the yarn to be tight to the feel. The yarn should feel "easy" to the hand, back and front, and any good slasher man knows how to control the tension in front with the tension cloth.

CONTRIBUTOR NO. 5024.

Still Another Opinion on the Effect of Different Size Rolls on Yarn Number.

EDITOR COTTON:

"CONTRIBUTOR NO. 6029" asked the question as to whether different size top rolls will cause variation in yarn numbers. His idea being that there will be less leverage and surface contact with a small roll than with a large one, consequently causing more slippage between the top roll and the steel roll.

In spinning, the top rolls are slightly smaller than the steel roll, usually 15/16-inch diameter. Should a roll be 14/16-inch instead of 15/16-inch then, strictly speaking, the leverage would be reduced as the radius is reduced, or in this case the radius would be 14/32 instead of 15/32 or a 6⅔ per cent reduction in leverage. As the circumference of a circle varies directly as the diameter, then it is certain that the arc of contact would also in this case vary 6⅔ per cent.

Whether this variation would cause or tend to cause variation in the numbers is a subject where the burden of proof is on the person who tries to answer the question, yes or no. To see what I could find, I fixed a tachometer to read in feet per minute. By holding the rubber disc against the steel roll and thus doing the same to the top roll and recording the result, I expected to find that the steel roll was making slightly more speed per minute than the top roll, instead, I found that I was getting just the opposite. The reason for this was that there was more frictional loss between the steel roll and the rubber disc than between the leather roll and the rubber disc.

Still going further with the test we found, as expected, on a roll where we had lately put in a new section, that on this new section the surface speed as recorded was slightly more than on the older section where the flutes were worn. Therefore in trying to solve one question, another question came up in the form of whether we were using the same draft gears on old rolls and new rolls and if new sections in old rolls would further complicate the variation question as much as any difference in the diameter of the top rolls.

While a reduction in leverage might cause variation in numbers, it is our opinion that the variation would be so small that it could not be found in the regular run of work, and any amount of weighing and sizing would not prove a thing that could not be attributed to the variation in the roving used to make the test, the variation in the frictional quality of the different leather rolls, variation in fluted rolls, etc. Then any one of these conditions might cause the top roll to act the same as a smaller roll with less leverage and surface contact.

This contributor states that he has seen 30s yarn being spun instead of 40s on rolls where the saddles were not properly oiled. This of course could only happen with a retarded front or middle roll; a finer yarn than 40s would be spun with a retarded back roll. A condition such as this is one of faulty lubrication and not of leverage, or it might be that proper weights are not in use.

I understand that the arc of contact between a steel rail and a six-foot driving wheel of a locomotive is around an inch, therefore the possibility of moving the train depends upon the weight of the engine. If

this is the true arc of contact of the big driving wheel and a straight rail, what must be the true arc of contact between two 1-inch circles? I think that this illustration shows that weight on the rolls is of far more importance than leverage or contact and enough might be applied to the top rolls to take care of any variation in leverage.

"CONTRIBUTOR NO. 6029" may not realize it, but this subject has all the ear marks of developing into one of similar character that has at times come near to breaking up life-long friendships—that old question of which puts in the twist, the traveler or the spindle?

CONTRIBUTOR NO. 6045.

Some Advice for the Second Hand.

EDITOR COTTON:

I have been reading a great deal in your magazine recently about the duties of second hands. I would like to give you my ideas on this, especially in connection with twisting and spinning.

The first thing a second hand ought to remember is to be on his toes every minute of the day. He must be firm with the help and always do just what he promises to do for them. He should never take a thing for granted just because he has given an order. He should go back and find out if they have done it for certain. This, however, should be done in a friendly manner. For example, if having given an order to change a certain frame of travelers which were too heavy, go to the section man afterward and say, "How is the frame running now, since we changed it?" Then carry him right on to the frame and if he has carried out your order, you should make him realize that you appreciate his efforts. If he hasn't done so, give him a talk the first time as to never putting off anything until tomorrow that can be done today.

The second hand should by all means try to determine and create the best general attitude and cooperation between the superiors and the workers, and in doing this, the second hand should check up on all orders given by him. He should not be a contentious bellyacher just because everything is going wrong and the work is running bad. A second hand should not jump in and give a spinner hades, but should help her out the first time and get the blues out of her. But should it happen too often, then is the time to let things fly.

A second hand should by all means train his help and tell them just what is wanted and show them, and then see that they do it. A second hand has a thousand things to watch. He must watch his travelers and keep them changed systematically, and see that the oiling is done correctly.

Some men get promoted to second hand or overseer and get in the habit of being quick spoken or crabbed. This should be avoided.

A second hand, overseer or superintendent should regularly go to Sunday School and get his help in the habit of doing the same thing. He should stand pat on every decision, making first sure that he is right.

C. F. (ALA.)

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The Compound As Applied to Cotton Roving Frames.

By Fay H. Martin

As promised in the May issue, we present here a clear description by Mr. Martin of the "mysterious" compound on cotton roving frames. He has presented this complicated mechanism in a manner that will make it readily understood. This contribution is a logical follow-up of his discussion of the construction of roving frame cones, which appeared on page 82 of the May issue.—The Editor.

EDITOR COTTON:

The function of the compound on a roving frame is to add the variable speed of the bottom cone into the positive speed of the main shaft.

The gearing on a roving frame is so arranged that the speed of the spindles and the speed of the bobbins are exactly the same, and both are driven by the main shaft.

If the speed of the spindles, which remains constant, and the speed of the bobbins, were the same throughout the doff, no winding of the roving on the bobbin could take place, hence we are obliged to have a pair of cones for the winding of the bobbins, and the speed produced by the cones is added to and is in excess of the bobbin speed to an amount equal to the number of inches of roving being delivered by the front roll. This excess surface speed of the bobbins must remain the same, while the bobbins are being filled, so the revolutions of the bobbins are changed at the end of each change of traverse, so as to maintain a proper tension on the roving. (See article by Mr. Martin, page 82, May COTTON.)

The winding of the bobbins and the tension of the roving is controlled by the speed of the bottom cone, and since this speed cannot be applied directly to the bobbin shafts, a compound is required and is used for the adding of the bottom cone speed to the positive speed of the main shaft. These combined speeds are in turn delivered to the bobbin shafts.

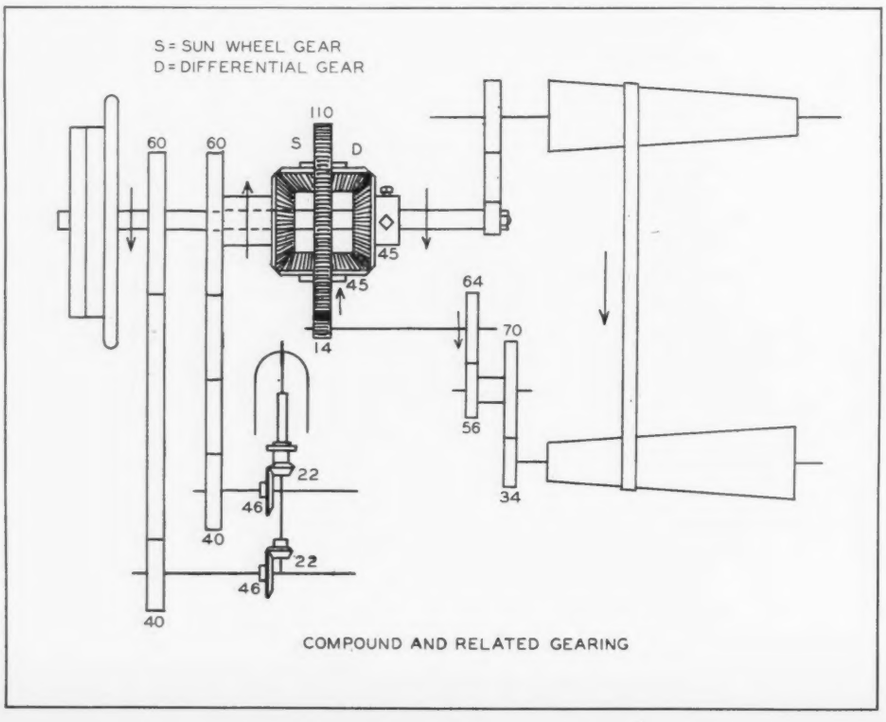
We will describe the compound in its simplest form. As it was invented over one hundred years ago, this form is the bevel gear or Houldsworth type. This type of compound motion has remained in use, with only slight alterations, as it was originally designed by Houldsworth, up to the present time and is now largely in use. However, during the past thirty years several improved and ingenious methods have been devised to overcome the one great fault of the bevel gear compound, which is that of the sleeve gear running in the opposite direction to the main shaft, upon which it revolves. This creates undue friction which requires power to overcome.

But the improved types, of whatever form, do not change the principle of the compound and the results are just the same, which is that of adding the variable speed of the bottom cone to the positive speed of the main shaft.

This problem of how to obtain a combination of two speeds has been solved by introducing into an ordinary train of gears, other gears on movable centers.

An arrangement of this kind is called in mechanics an epicyclic train of gears: but in terms as used in cotton mills, it is known as a differential motion or compound. We prefer to call it a compound as it adds and combines two different speeds into one.

A differential can be illustrated by taking two spur gears of the same number of teeth and pitch, laying them beside each other on a bench with the teeth in mesh. Mark the teeth where they mesh. Then hold one gear from moving and roll the other one around the outside of it. When the moving gear has arrived at the point where the teeth were marked, you will



COMPOUND AND RELATED GEARING

find that the moving gear has made one complete revolution, thus you will see that it has revolved not only once around its own center, but has also passed once around the center of the gear that was held fast, thus making a differential movement. This movement has only illustrated a principle. To become effective, the moving gear must be connected with other gears. If the moving gear was tipped on edge at right angles, and bevel teeth applied to both gears, you would have a bevel gear differential which to become effective must have a third bevel gear added to the train.

We will now take the three bevel gears and give them suitable surroundings, to make them workable (see sketch) we add a fourth bevel gear of the same size and number of teeth as the others. This fourth gear only acts as a balance and is not needed as far as the differential motion is concerned. The differential gears turn on centers that are supported and carried by the sun wheel which is loose on the main shaft, thus we have a bevel gear compound.

The bevel gear that has been made fast to the main shaft is the driver, while the bevel gears that are held at right angles to it on the sun wheel are the differential, and the bevel gear that is on a sleeve and opposite the driver on the main shaft, is the driven or sleeve gear. This gear is loose on the main shaft.

The sun wheel is made to revolve by a train of gears from the bottom cone.

Now we have four bevel gears all of the same number of teeth and a sun wheel all assembled on the main shaft in proper relation to each other. Now we will see what happens: by holding the main shaft still so it cannot move, we will revolve the sun wheel one complete turn. This will carry the differential gear one complete turn around the driver gear, and at the same time, it has made one complete turn around its own center. This motion of the sun wheel and the differential gear will cause the sleeve gear to revolve two turns. This is because the differential gear has made one turn around the driver gear and once around its own center, and, as 1 and 1 equal 2, the sleeve gear has moved twice around its own center.

If the sun wheel was held fast, and the main shaft revolved one turn, the differential gear would only have made one turn and the sleeve gear the same. Thus you see that it is only when the differential gear is in motion that any addition is made to the revolutions of the sleeve gear, and then only to twice the extent of the revolutions of the sun wheel.

Let us illustrate. Suppose the main shaft is revolving 300 turns per minute and the sun wheel 20 turns per minute. The sleeve gear would be revolving 340 turns per minute. 300 revolutions would come from the main shaft gear and 40 from the differential. The sun wheel would get 20 turns from the bottom cone and 20 turns would come from the differential gear, thus delivering 40 turns to the sleeve gear.

The foregoing tells you how the speed of the bottom cone is added to the speed of the main shaft, and since the speed of the bottom cone changes at the end of each traverse of the rail, the speed of the sun wheel changes at the same time, thus the speed of the bottom cone is passed on through the sun wheel to the sleeve

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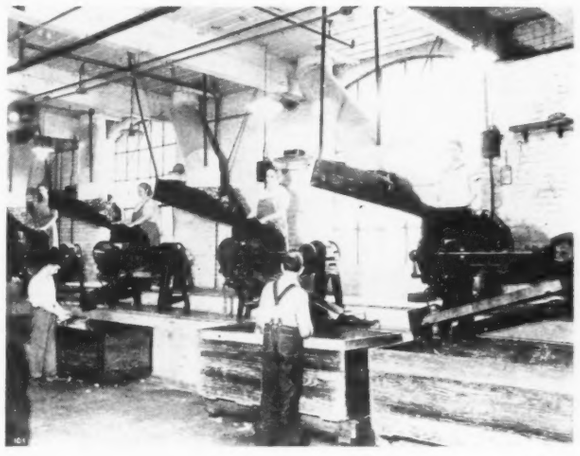

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gear and thence to the bobbin shafts, whose revolutions change just enough to make the added revolutions conform to the amount of roving being delivered by the front roll. Any variation in the speed of the bottom cone is reflected to the excess surface speed of the bobbins, hence it is very important that the shape of the bottom cone must be very exact to enable a roving frame to run with a perfect tension.

Tension, the most important element of a roving frame, is controlled directly by the speed from the bottom cone, and the function of the compound is to add this speed to the speed of the main shaft and pass it on to the bobbin shafts.

Opinions as to the Causes of Neps.

If you have any suggestions to add on this question, which is reprinted here, please send them in.

Editor's Note: On page 78 of the March issue, the following question from "CONTRIBUTOR No. 6046" was published. Inasmuch as the appended answers to the question involve references to his speeds, settings, etc., the question is reproduced here for reference:

I should like to have some help through the columns of "HOW OTHER MEN MANAGE". My trouble is neps in the card sliver. My card settings are as follows: Flats, 7; stripping plate, 34; bottom plate, 22; doffer, 7; licker-in to cylinder, 7; feed plate to licker-in, 10; mote knife, top and bottom, as close as possible without hitting screen, back, 12; middle, 34; and top ¼-inch; back plate, 22.

We run Middling cotton, 1 1/16-inch. The net weight of our laps is 42 pounds, making a 51—52-grain sliver. We strip four times in a day of 11 hours.

The cylinder speed is 160 r.p.m., doffer 11 r.p.m. We have tried 7 r.p.m. on the doffer with no noticeable difference in the sliver

Our stock looks like it is rolled.

Our opening machinery consists of one vertical opener, one Centrif-Air cleaner, one Murray cleaner. Our picking is two-process. The breaker has a 3-blade beater and the finisher a Kirschner beater.

Any suggestions as to what might be done to eliminate the neps mentioned will be appreciated.

EDITOR COTTON:

In response to the question of "CONTRIBUTOR No. 6046" in regard to neps in the card sliver.

For 1 1/16-inch Middling cotton, the settings and weights which this man is using in my mind are satisfactory, and I believe that some of his trouble is in the opening and picking. He does not state the speed of his beaters or blows per inch, and I suggest that he check on these.

I have run a test on 1 1/16-inch Middling cotton through a Murray cleaner, and a test not using the Murray cleaner, and found the card web to show better on the latter for this particular stock.

I would suggest that "CONTRIBUTOR No. 6046" run a test with ten bales of cotton, making sure the cotton is equal to Middling preparation and grade, omit the Murray cleaner, reduce his beater speeds on his breaker pickers to not more than 1,100 r.p.m.; and on the finishers to not more than 900 r.p.m. Set the beaters on the breakers ⅜-inch, and the Kirschners on the finishers as close as possible. On the cards, use the same settings with the exception of the feed plate. If the teeth on the licker-in are not jammed, and the licker-in is sharp, I would use a 12/1000 or 15/1000 instead of a 10/1000 setting.

Of course we know that clothing on cards must be sharp for good results, and no doubt the contributor has checked on this point.

This man also states that he has tried slower doffer speeds with no marked improvement being shown. This seems rather strange, for in most cases this alone would help the quality of the work. I believe if this man will check his pickers thoroughly, and reduce his doffer speeds again, and run a fair test, he will be able to obtain the desired results.

CONTRIBUTOR No. 6079.

EDITOR COTTON:

I am writing an answer to the question of "CONTRIBUTOR No. 6046" with regard to neps in card sliver.

From the figures given, I find he is taking off 10.5 pounds per hour, which seems that clean work is second to production. It would have to be "super" cotton in order to run through a card at the rate of 10.5 pounds per hour and not have neps. As he must have that production, however, we must help him with our opinions.

He gives his doffer speed as 11 r.p.m. and his cylinder speed as 160 r.p.m. It seems to me that his doffer speed is too high and his cylinder speed too low. By speeding up his cylinders to 168 r.p.m. (solid floor required) and increasing the weight of the lap from 14 ounces per yard to 15-ounce, he can slow his doffer speed to 9.8 r.p.m., a reduction of 1.2 r.p.m., which will save a lot of wear and tear besides producing the benefit of the extra revolutions of the cylinders in the cleaning of the cotton.

The cause of stock being rolled seems to be too much cleaning, for Middling cotton, before reaching the breaker picker, according to the lay-out he has given.

We are running 1 1/16-inch cotton, as well as staples up to 1⅜-inch. These are our settings on 1 1/16-inch cotton:

Flats to cylinder	8—tight 10
Stripping plate	17—34
Doffer to cylinder	7
Licker-in to cylinder	7
Feed plate to licker-in	10
Mote knives	10
Back plate	17—34
Pounds per hour	6.8
Grade of cotton	S.L.M.

CONTRIBUTOR No. 6080.

EDITOR COTTON:

I would like to help "CONTRIBUTOR No. 6046" with his trouble of neps in card sliver. He does not advise the condition of his cards, but I would judge from his letter that they are not very sharp. I would advise him to see to it that his cards are properly ground and that the mote knives are sharp.

I think some of his settings are too close and cause the stock to look like it is rolled. If his cards are on an upstairs floor, or a vibrating floor, the flats will spring down and rub the cylinder enough to keep the clothing on both the flats and the cylinder dull. I would set the feed plate to the licker-in, 12/1000; mote knives, 10/1000; licker-in to cylinder, 10/1000; flats to cylinder, 10/1000; doffer to cylinder, 7/1000; doffer comb to doffer just close enough to fan the cotton

off of the doffer, which is about 29/1000. I think all of the other settings he mentions are about right. On all of these settings the gauge should not be tight.

I would prefer making a 56-grain sliver instead of a 51- or 52-grain sliver. I am of the opinion that the reason his stock looks like it is rolled is because some of his settings are so close that instead of being properly carded, some of the cotton is rolled.

CONTRIBUTOR No. 6081.

EDITOR COTTON:

Referring to "CONTRIBUTOR No. 6046's" question, as to what causes neps in card sliver. In answering this question it is assumed that the cotton in the bale is reasonably free of natural neps. The card settings and the speeds of the cylinder, doffer and licker-in are quite in order, and, it being assumed that the clothing is being ground correctly and often enough, it is most likely that the card is not the cause of giving the excessive neps in the sliver. It is of course understood that the cylinder underscreen is in first-class order, also that there are no excessive air leakages on the card.

The trouble very probably might be found in the opening room. It is stated that your contributor has a vertical opener, Centrif-Air cleaner and Murray cleaner. Each of these machines when used alone with Buckley beater type opener gives excellent results, but unless each of these machines referred to is adjusted perfectly, that is to say, with the right speed and draft in accordance with the production being put through them, there is a great risk that they will curl and mat the cotton in such a manner that it is impossible for the card to function properly. Your contributor does not mention what speed or setting he has in the Kirschner beater of the finisher picker. However, it is suggested that he run this beater at approximately 850 r.p.m. with a setting of 3/16-inch to the feed roll.

It is also suggested that if the cotton is conducted by pipe lines and drawn by condenser that the latter apparatus be carefully examined and tested for air leakages. Also that the speed of the condenser and fan be adjusted in order that a constant delivery of stock is made. In other words, the stock must under no circumstances be allowed to dwell in the condenser.

T. K. (GA.)

EDITOR COTTON:

In regard to the question on neps from "CONTRIBUTOR No. 6046", I would like to suggest the following:

Set the feed plate to the licker-in in to a 7/1000. Make a heavier lap on the pickers. This will cause him to draft more on the cards, thereby giving him the same cleaning capacity at the card. I do not see the need of a 34/1000 setting on the stripper plate unless he is using his own strips; as a setting that wide will put too much good cotton in the strips.

Also, I would cut the speed of the doffer as much as possible, and see that the clothing on the cards is sharp, tight, and not the least bit "hooked".

Then I would go to the pickers, where, as I have said, I would make a heavier lap, and get all the beats

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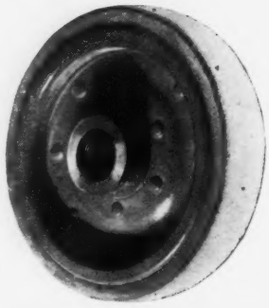

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per inch possible on the finisher picker—80 beats per inch will not hurt 1 1/16-inch stock. Next I would check the vertical opener to see if it is leaving the stock "curled" or rolled. If this is the case, then I would speed up on this machine to stop "curling" or rolling of the cotton.

CONTRIBUTOR No. 6082.

EDITOR COTTON:

After reading the question in March COTTON as to the causes of neps in card sliver, I decided I would offer some suggestions that might be of help. I do not know that what I will say will be of value, but I would suggest trying it out on one card first.

First, be sure that the licker-in is in good shape and that the cylinder, flats and doffer are sharp, as we all know that we cannot get good results from a dull card. Then I would use the following settings:

Feed plate	17/1000
Licker-in to cylinder	7/1000
Back plate	29/1000
Screen to licker-in	17/1000
at the back	¼-inch
Screen to cylinder,	
back	17/1000
center	64/1000
front	¼-inch
Flats to cylinder, at all points	10/1000
Front plate, top	34/1000
Front plate, bottom	29/1000
Doffer to cylinder	7/1000
Mote knives to licker-in,	
bottom	10/1000
top	11/1000

These are the settings we use, carding 135 pounds per ten hours per card. We arrange our flats to take out about 20 grains of strippings to each flat.

I also suggest to the man that he be sure he has a *screen* under the card, and not a make-shift.

CONTRIBUTOR No. 6084.

Carding Discussion at Columbia.

(Continued from page 48.)

system throughout his plant, and "there is no question about the Hill system being superior."

Runs Humidifiers at Night and On Week-ends.

Following the discussion on spraying oil, the chairman then asked members to describe any improvement they had effected since the last meeting of the division.

"We think one of the best things we have done is to install the master control on our humidifiers," said Mr. Chandler. "We never stop our humidifiers; they run nights and week-ends and at all other times. We have Bahnson humidifiers with the master control, and we think it is one of the best improvements we have made. We are standing this week, and the humidifiers are running." Mr. Chandler said he has heat control in one mill and no heat control in the other.

David Clark here described a home-made device he had seen recently which, with a change in temperature in a department of three degrees, signalled the man in the boiler room; the actuating device being a part taken from a Model T Ford.

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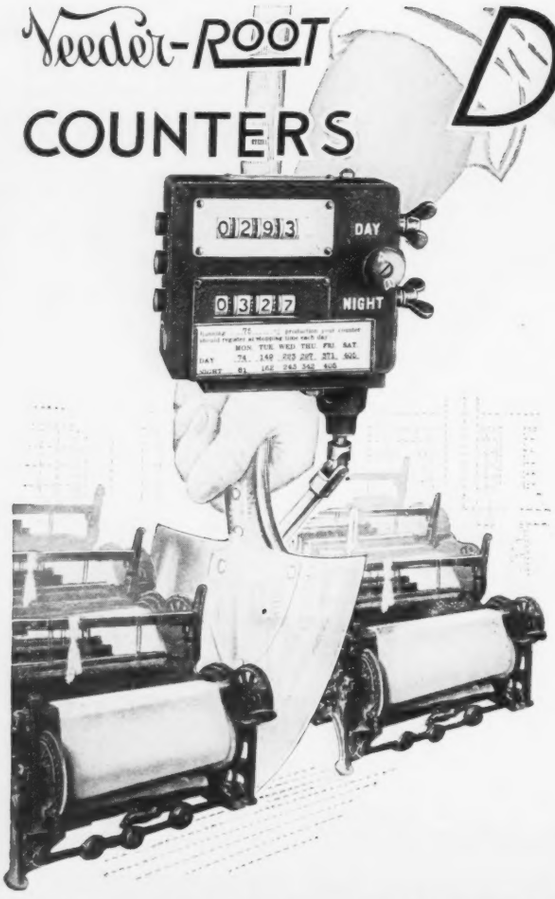

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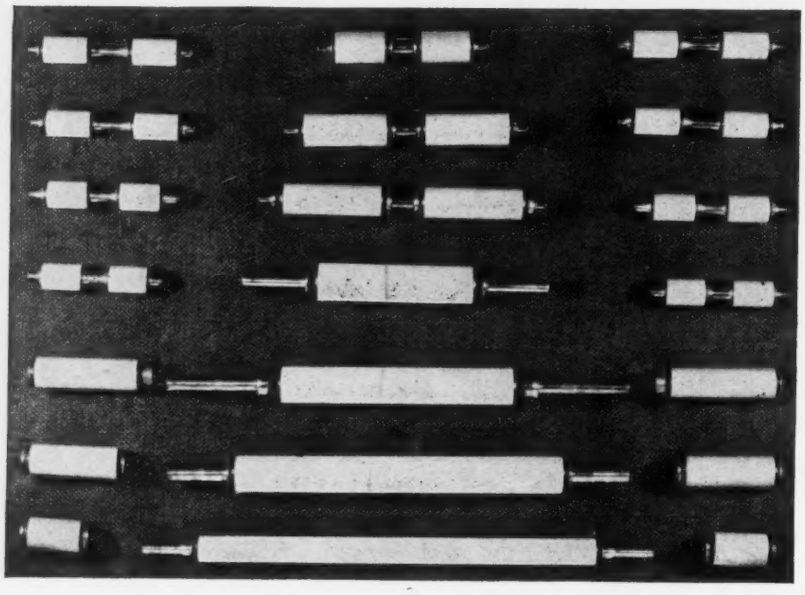

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Chairman Corn introduced a discussion of long draft spinning by asking, "Why can't we spin 30s from 1.00-hank roving, Lockman?"

Long Draft on Spinning.

Mr. Lockman said that on an 80-spindle experimental frame, Saco-Lowell, he had gone to a draft of 27; "that was just a sample frame," he said, "but I am convinced that it is possible." Mr. Corn asked if he could go into the card room—with a draft of 17 or 18—and make a 3.25 hank roving and put it in the spinning.

"I would start right back at the picker room, and I would make my lap right, and then the card sliver, and drawing sliver, and then the slubber and intermediate and speeder roving—if I used a speeder—and make them all right," said Mr. Lockman.

"What is right?" asked Mr. Corn.

"You would certainly use more draft in your card room than previously," said Mr. Lockman, "in getting the roving ready for long draft spinning."

Mr. Underwood said that at Piedmont they are making 13½s from .84-hank slubber roving, Casablancas long draft spinning; where they had been using two processes, with a 1.80-hank roving from speeders. They now have a 11x5½ package instead of an 8x4 previously used. Mr. Lockman said they went from a 7.25 to a 5.32 hank in making 41s filling, with the long draft, and put more draft right through the card room, and got a better, stronger, more even yarn.

H. H. Willis told of making an experiment, some ten years ago, on several different lots of cotton, by running an even draft, and the regular draft, and then reversing the procedure and putting the spinning draft on the slubber and the slubber draft on the spinning; and he said that in no case was there any appreciable difference in the breaking strength of the yarn.

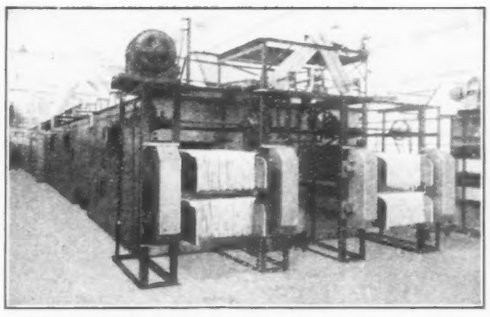
"That's just the point I am coming to," said Mr. Corn. "What is done in the mill that changes; do they get a longer draft on the slubbers, intermediates, and speeders, or do they shorten up the draft and bring it up to a heavier roving for the spinning?"

"We are making 30s from 4.00-hank, and 40s from 5.00-hank," said Mr. McNeill. "We did not go any further back than the finisher drawing. We changed the drawing and slubber and intermediate and speeder, shortening them up."

"That's what I did," said Mr. Corn. "My total draft through the card room is considerably less."

Mr. Lockman repeated that he made longer drafts in the card room, and his overseer of carding, Mr. Floyd, gave a specific case for illustration: "We are making 1.35-hank slubber roving out of 48-grain finisher drawing sliver, and draft that into a 5.68-hank finished roving for the spinning, for 41s; and a 1.25-hank, into a 4.00-hank for 30s; the breaking strength compares favorably with that on three processes with less draft."

C. H. Underwood of Piedmont asked as to card drafts, stating that he is running a 140 draft. "In changing to the Casablancas, with a 65-grain card



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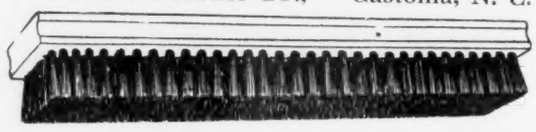
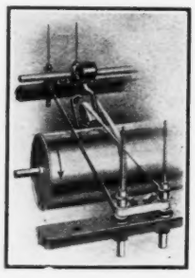


GASTONIA *Brushes*



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sliver we had to make this 48-grain and had to draft more on the card because we did not have the pickers to keep up, thus cutting our production almost ⅓. Then we went up to 13 turns of the doffer to get the production back, holding to a 15½-ounce lap."

"In running card tests, I have had men come in and ask what sliver we are running, and what doffer speed, and the doffer speed would probably be less than half of theirs, and yet we were getting more production by carding fast and lighter," said H. H. Willis.

Mr. Corn expressed a preference for light (not too light) and fast carding. "But I think you can go to extremes either way. I ran some tests on that last year, and we went to an exceptionally light and fast method, and while I cannot say it hurt the work I did not think we got any advantage." Mr. Connelly added, that, in going down to as light as a 9-ounce lap, he could not get an even lap.

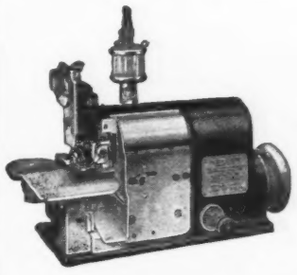
The last question discussed was asked by Mr. Floyd: "What twist multiples do the carders present use?" One man reported 1.25 on 5.00-hank; another 1.34 on 7.00-hank; another 1.52 on 5.25-hank, Mr. Willis asked why the 1.52 was used on the 5.25-hank, and Mr. Hamrick replied, "To keep the roving from breaking back in the spinning." Mr. Corn explained that the matter of multiple depends somewhat upon the type and condition of spinning creel. He said that with the flat type skewer about 2 or three teeth more twist is required than with the porcelain cup set. This concluded the discussion and the meeting was adjourned.

American Association Meeting.

(Continued from page 34.)

er was Richard B. Russell, Jr., governor of Georgia, who discussed economy in government.

The concluding session on Saturday morning was the executive business meeting, at which the reports of the secretary-treasurer and committee chairmen were made. Resolutions adopted encouraged the growing of longer staple cotton; more economy in government through the elimination of waste and reduction of appropriations; and urged an adequate tariff on jute as well as authorizing the Association's national committee to compile and disseminate facts to give the public the true conditions of jute competition. Resolutions of condolence in the loss of members by death during the past year, and separate resolutions on the passing of Ex-Presidents W. A. Erwin and Arthur J. Draper, were adopted by a rising vote in respect to their memories. Russell T. Fisher, secretary of the National Association of Cotton Manufacturers, was recognized as a guest and representative of New England at the meeting. Officers were elected, as reported, the new president, Mr. Gossett, being escorted to the chair by Ex-President William E. Beattie and George A. Sloan. The retiring president's medal was presented to Mr. Callaway with a fitting tribute by Ex-President William J. Vereen. The meeting was adjourned with everyone agreeing that it was the most enjoyable, profitable and altogether successful convention in the association's history.



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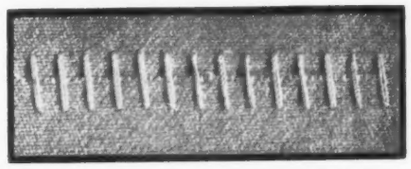

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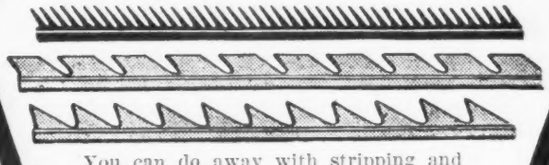

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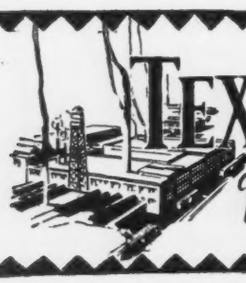

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54. Shipper's Handy Helper—A forty-eight page booklet giving valuable information on shipping problems, including suggestions on packing, marking, numbering and invoicing shipments and describing the principal items generally used in shipping departments. Southern Shippers Supply Co., 118 Courtland St., S.E., Atlanta, Ga.

55. Interpretation of Analysis for the Layman—An eight page booklet explaining what the various terms used in fatty oil and sulfonated oil analysis mean, enabling the ordinary textile man without chemical education to interpret the various chemical analyses. National Oil Products Co., Harrison, N. J.

56. Technical Service Data—giving information on processes of textile manufacture in the use of oils, softeners, etc. National Oil Products Co., Harrison, N. J.

57. Reducing Textile Costs and Troubles telling all about the benefits of water treatment. Permutit Co., 440 Fourth Ave., New York, N. Y.

61. Belt User's Book—76-page book with suggestions, rules, tables and charts helpful in the purchasing, application, use and care of belting. J. E Rhoads and Son, 35 North 6th Street, Philadelphia, Pa.

62. Rubber Products for the Textile Industry—a 40-page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts showing horsepower rating pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan Inc., Passaic, N. J.

63. S-W Paint Standardization Plan—valuable booklet telling how protective coatings can effect economies in plant operation and maintenance, describing how each surface is finished to best meet its specific needs, giving ideal lighting and sanitary conditions and economies in increased production. Sherwin-Williams Co., 601 Canal Rd., Cleveland, Ohio.

64. Efficiency and Performance of SKF Roller Bearing Spindles—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., 40 East 34th St., New York, N. Y.

65. Why Cooper Hewitt Light is Better Than Daylight—a 16-page booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Elec. Vapor Lamp Co., Hoboken, N. J.

66. Drensfield's Patent Portable Auto-Feed Needle Point Grinder No. 176, describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

67. Specification and Size book, I-31, convenient reference book giving complete information and prices on Rockwood Short-Center Drive for textile machines. Rockwood Manufacturing Company, Indianapolis, Indiana.

68. Rockwood Pulley Specifications, a reference booklet giving complete specifications of 2,540 stock sizes of pulleys. Rockwood Manufacturing Company, Indianapolis, Indiana.

69. Monel Metal Equipment for the Textile Industry—a 50-page buyer's guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

70. Fafnir Ball Bearings for One-Process Pickers—outlining the advantages of ball bearings in guaranteeing smooth accurate motion particularly on eveners, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

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72. The Merrow Butted Seam—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

73. New Reeves Catalog T-32—A treatise on efficiency speed control—including valuable information of special importance to textile industry men and production executives outlining advanced methods of speed regulation. Reeves Pulley Company, Columbus, Indiana.

74. Colgate-Palmolive-Peet Bulletin No. T-22—booklet giving complete details of degumming and dyeing in a single bath with soap. Colgate-Palmolive-Peet Co., 919 North Michigan Ave., Chicago, Illinois.

75. The Facts About Armstrong's Seamless Cork Cots—A helpful book containing plain facts, cost studies based on actual mill records, expert analysis, complete details on the advantages of Armstrong's Seamless Cork Cots. Armstrong Cork Company, 923 Arch Street, Lancaster, Pa.

76. Jointite Cork Products—Giving information on the uses of cork for insulation purposes, including useful data, specifications, tables, and charts for roof insulation, refrigeration, sound-proofing, heat prevention, heat conservation, vibration deadening, and condensation prevention. It contains concise and valuable data on all of these subjects, as well as photographs and drawings showing specific examples of various types of construction, test curves, etc. Copy sent free to anyone interested in any of these subjects. Mundet Cork Corp., 450 Seventh Ave., New York, N. Y.

77. Bulletin T 200—illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages, and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

78. Booklet L 1289 A, Loom Motors and Control—giving details of the low installation, operating and maintenance cost of Westinghouse Loom Motors. Westinghouse Electric & Manufacturing Company, Room 2 N, East Pittsburgh, Pa.

79. Diamond Alkali Handbook—Containing useful information relative to Soda Ash, Caustic Soda, and Liquid Chlorine. Diamond Alkali Co., Koppers Bldg., Pittsburgh, Pa.

80. Alkaline and Other Detergents—a twenty page booklet on alkaline and other detergents and their function in textile processing and general cleaning operations. Diamond Alkali Co., Koppers Bldg., Pittsburgh, Penna.

81. Leather, Textile—an 88 page handbook on the selection of textile leathers, giving data on VIM Leather Belting, Cone Belts, Gainer Belts, Loom Straps and Round Cord Belting, by E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

82. Sizing Products—32 pages of simple technical data on the selection and preparation of size for all types of warps, by E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Penna.

1. Cotton Picking, Carding and Spinning—Covered by three different catalogs. Picking catalog covers Opening and Picking Machinery; Card Room catalog covers Cards, Combers and Roving Frames; Yarn Machinery catalog covers Spinning, Twisting, Spooling, Quilling and Reeling By Whitin Machine Works, Whitinsville, Mass.

2. Pepperell Equipment—10 page illustrated booklet, showing High Speed Warping from cones as adopted by Pepperell Manufacturing Company after thorough experiments. Installation and product photographs. Issued by Universal Winding Company, Boston, Mass.

4. New Methods of Opening Cotton, also "Brown" Automatic Mixing and Cleaning Distributor—Illustrated booklets showing advantages of Centrif-Air Cotton Cleaning System. Pamphlets also on better picking and carding and pneumatic trunk line cleaner. Issued by Centrif-Air Machine Company, Atlanta, Ga.

8. "Textile Brushes"—10 page booklet illustrating brushes for cleaning every part of mill. By Gastonia Brush Co., Gastonia, N. C.

10. Leathers, Textile—Booklet No. 101, 48 pages. Illustrated. Showing BONDARON Check Straps—Lug Straps—Harness Straps—Pickers—Belting, both round and flat, etc. Horsepower tables and other interesting information. By Charles Bond Company, 617 Arch Street, Philadelphia, Pa.

11. Whitinsville Rings—16 page illustrated booklet. Describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

15. The Powers System of Thermostatic Control—"Slasher Room is Bottle-Neck of Textile Mill." 18 page illustrated booklet showing importance of proper treatment of cloth in slasher room and advantages of Thermostat over hand control. Also room temperature control illustrations. Issued by Powers Regulator Co., 2739 Greenview Ave., Chicago, Ill.

18. Popular Industrial Chemistry—162-page handbook for dyers, chemists, finishers, purchasing agents. By Kali Manufacturing Company, 1404 No. Front St., Philadelphia, Pa.

20. Bleaching, Dyeing, Finishing and Printing Textile Goods—70-page booklet containing interesting information on faults and methods in finishing goods, useful tables and definitions. By Bosson & Lane, Atlantic, Mass.

21. Warp Sizing and Composition of Cotton—Folder containing reprints of articles carried by textile publications of interest to progressive mill superintendents. By Seydel-Wooley Co, 748 Rice St., Atlanta, Ga.

22. Tragasol and Its Uses—Booklet, 60 pages, constituents and properties—Dissolving and preparation—sizing and dressing of yarns—cloth finishing—miscellaneous. By John P. Marston Co., 247 Atlantic Ave., Boston, Mass.

23. Practice of Rayon Sizing in American Mills, Raygomm, Lakoe Gum—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

25—"Lupogum" and "Monopole Oil"—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

28. Akron Belting.—Practical rules and general information for users of belting with belting catalog. By Akron Belting Co., Akron, Ohio.

29. Continuous Card Stripper—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. Lubrication of Textile Machinery—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York and New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

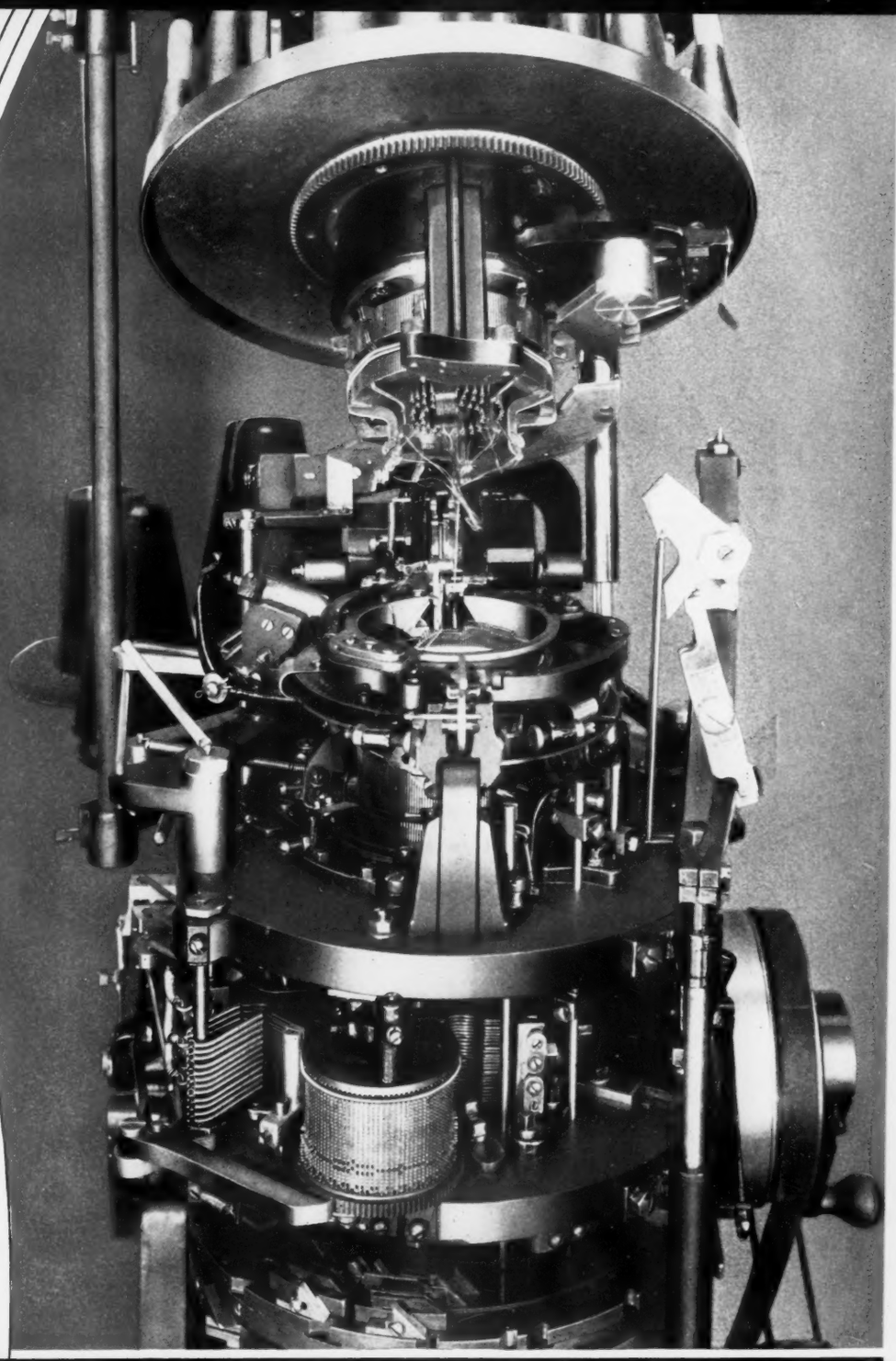
38. Sleaziness in Full Fashioned Knitting—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machine with general information on subject of full fashioned knitting.)

41. Budget Control—40-page booklet showing how each part of business budget should be prepared and principles of its effective operation together with a summary of benefits. By Ernst & Ernst, accountants, 27 Cedar Street, New York, N. Y. (This company also has available booklets on **Standard Costs, Business Control Through Analysis, The Better Wage, Factors to Consider in Working Out Mergers.**)

42. Textiles and the Telephone Typewriter—6 page booklet on telephone typewriter service for communication between mills and selling houses. By American Tel and Tel. Co., Long Lines Department, Atlanta, Ga.

44. Points of Interest in and Around Atlanta—36 pages. Illustrated, describing places of scenic and historic interest in Atlanta in particular, and the Southeast in general. Atlanta Biltmore Hotel, West Peachtree, Fifth, Sixth & Cypress Sts., Atlanta, Ga.

45. Fidelity Universal Ribbers—A forty-eight page booklet showing the advantages and many styles of ribbed fabric and describing in detail and illustrating the latest developments in ribbers. Sent free on request by Fidelity Machine Co., 3908 Frankford Ave., Philadelphia, Pa.



STANDARD TRUMP

Established 1872

NOTE THESE NEW FEATURES OF THE

CLEAN CUT DESIGNING SPEAKS FOR ITSELF

STANDARD 80 WRAP MACHINE

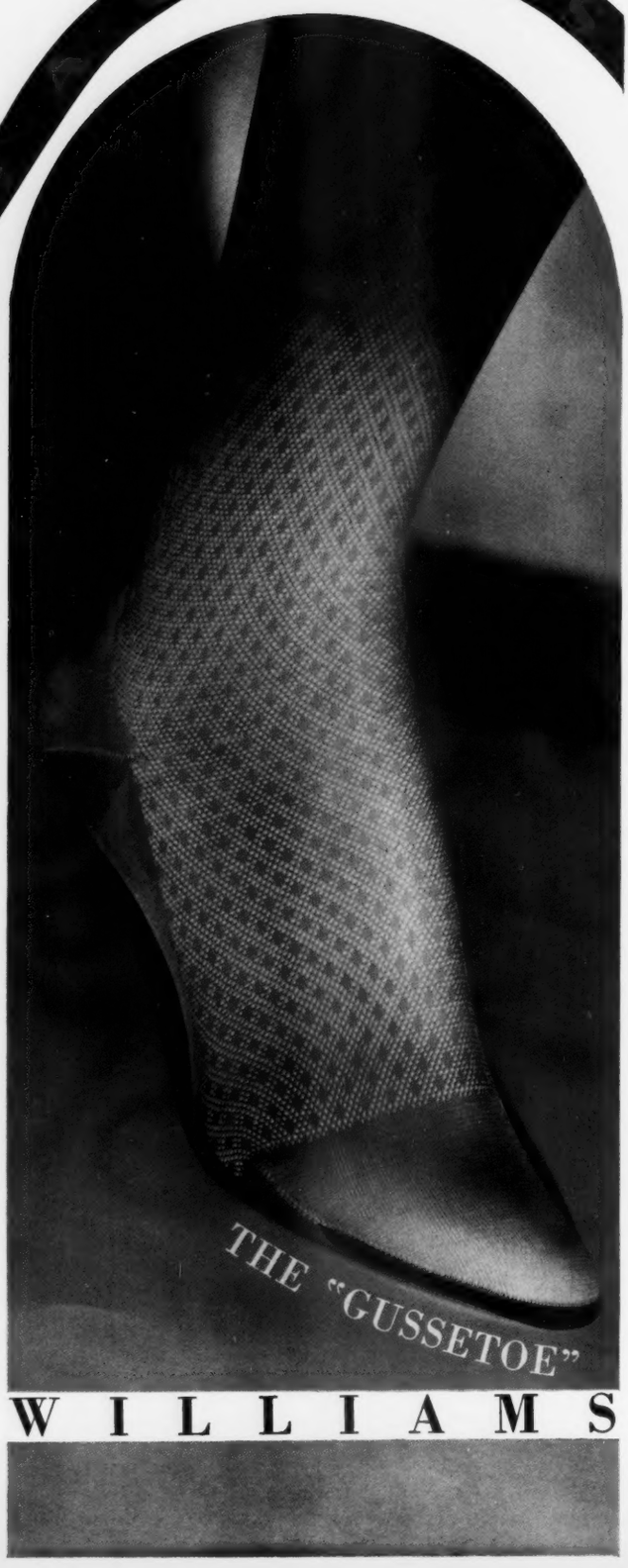
All pattern mechanism is in the front, for accessibility. . . wrap head can be put back, for clear view of the fabric . . . with wrap head back, it can be run as plain machine. Wrap yarns are knit without tension.

Mill owners, superintendents and fixers can see that the Standard 80 Wrap Machine has been designed from *their viewpoint* for mill operation . . . as well as to produce exclusive fabric.

STANDARD-TRUMP BROS. MACHINE CO.
INCORPORATED

366 BROADWAY · NEW YORK · N. Y.

KNITTING SECTION



This is the "GUSSETOE"... a toe with an actual gusset, knitted in, to give it depth ... the way a glove is gusseted to fit the finger.

There is NO SEAM to interfere with perfect smoothness at the tip; no "bulge" at the toe; no need to strain the fabric with smoothing out, for this "Gussetoe" is tailored in the knitting to the shape of the foot. It's an exclusive feature. See it on the product of Scott & Williams machines.

"THIS IS THE SCOTT & WILLIAMS MACHINE AGE"

Established 1865

SCOTT & WILLIAMS

Incorporated

366 BROADWAY NEW YORK, N. Y.

Maintenance Methods for Full-Fashioned Equipment and Plants

By A. E. Parker
Educational Dept., Ajax Hosiery Mills.

HERE the practices of an outstanding hosiery mill, in covering maintenance problem of full-fashioned machines, are given by a man well qualified to describe them. Practically every full-fashioned mill will find food for thought in his discussion of oiling, care of friction, care of needle beards, adjustment of carriers, temperature control, machine speeds—and other related problems involved in keeping the full-fashioned machine up to par . . . . . .

PLANT maintenance can be divided into two sections: first: machinery maintenance, and second, real estate maintenance. Even though both of these divisions come under the same head, they actually constitute two separate functions of the maintenance department and have to be handled separately in this article.

Machinery Maintenance.

Machinery maintenance is one of the big problems which confront the hosiery manufacturer, due to the high-speed machines, with their picot, pointex, and lace attachments, all of the equipment now receives more attention than ever before, not only from the manufacturer's point of view, but from the knitter's as well; so let us consider a few of the things necessary to maintain the machines in perfect running condition and to prolong their life. We feel that there are at least eight fundamental points to include in the following discussion.

Oiling the Machines.

Oiling the machines should receive our first consideration. More and more complicated parts are constantly being put on the machines, and every day, parts that should work freely get stuck for the want of proper oiling. Picot and sinker smashes, catch-bars off, motor bearings shot, and all from the same cause.

If oiling is left to the knitters and two shifts are in operation, one knitter blames the other for not oiling the machine, and as a result the division of responsibility causes a great deal of trouble.

Some manufacturers have a man to oil the lower parts of the machine and leave it to the knitter to take care of the upper part. This is only a half-way measure, however. Others have adopted the one-man oiling system which has proven very successful, in fact, it has entirely eliminated tight bearings and the stoppage of trucks. The plan is to supply one man with the proper sized oil-cans and a four-wheeled truck high enough for him to sit on when going along the back of the machines. He should be carefully instructed so that he will realize the importance of systematic oiling according to the lubricating schedule. The foreman of each section should check up on his work until he is thoroughly familiar with all the bearings; because the regular and thorough oiling of the bearings is of the utmost importance. It is surprising, within a few weeks' time, the number of machines which can be taken care of by one man and the amount of trouble and expense that can be saved. We believe in the assertion that the importance of proper oiling cannot be too highly stressed. When you realize that a tight bearing on an oscillating shaft, perhaps only tight enough to retard the motion of the machine, will cause cuts in the fabric, narrowing trouble, lace holes, and catch-bar jumpers, it is time to have proper oiling. Many a fixer has spent a long time trying to adjust a machine to eliminate trouble, only to find tight bearings, and then there has to be an entire re-adjustment made. A lubrication schedule, a copy of which is shown with this article, is issued by the Textile Machine Works of Reading, Pa., and can be followed for any type of machine. Copies of this schedule may be had upon request.

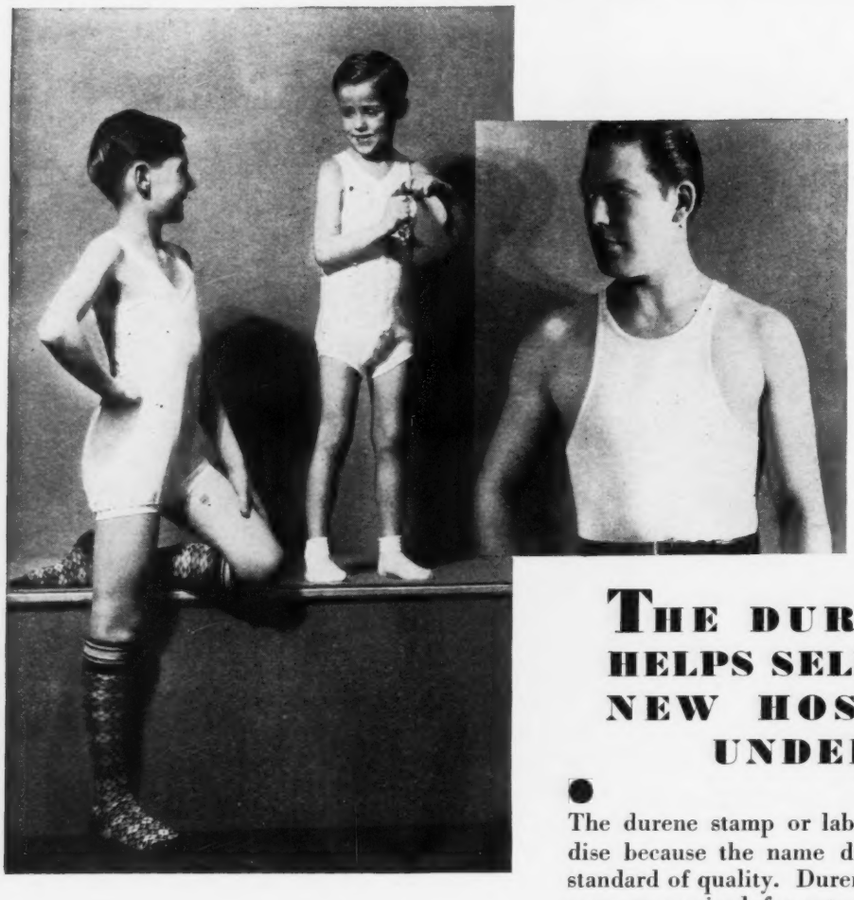
Care of Friction.

Friction leathers should receive more attention from the knitter than is usually given. It is a good plan to supply the knitter with an extra pair of leathers for his main friction so that he can change quickly in case he has carrier trouble. Otherwise, knitters are tempted to put on more spring pressure, thereby exerting more pressure on the machine. The cause of friction trouble is the continuous rubbing of the friction leather on the friction shaft under pressure. This creates a glazed surface, and the only way to reclaim friction leathers is to brush the surface with a wire brush, and then apply a few drops of castor oil which is rubbed on with the finger. After standing for a few hours, the leather will soften and regain its gripping qualities. All friction boxes should be left unlocked if the machine is to stand over night; and when stopping for the week-end, it is good practice to take out the main friction leathers and apply a little castor oil. When you put them back Monday morning, you will find them very much improved. A little care of the friction leathers will save many broken end-needles.

Mr. Parker.

Proper Adjustment of Carriers.

The proper adjustment of the carriers is another very important factor. The carrier tubes should not project below the top of the sinkers more than 1/64-inch. If the catch-bar should miss with the carrier tubes set below that point, the carriers will nick or



THE DURENE NAME HELPS SELL THIS FINE NEW HOSIERY AND UNDERWEAR

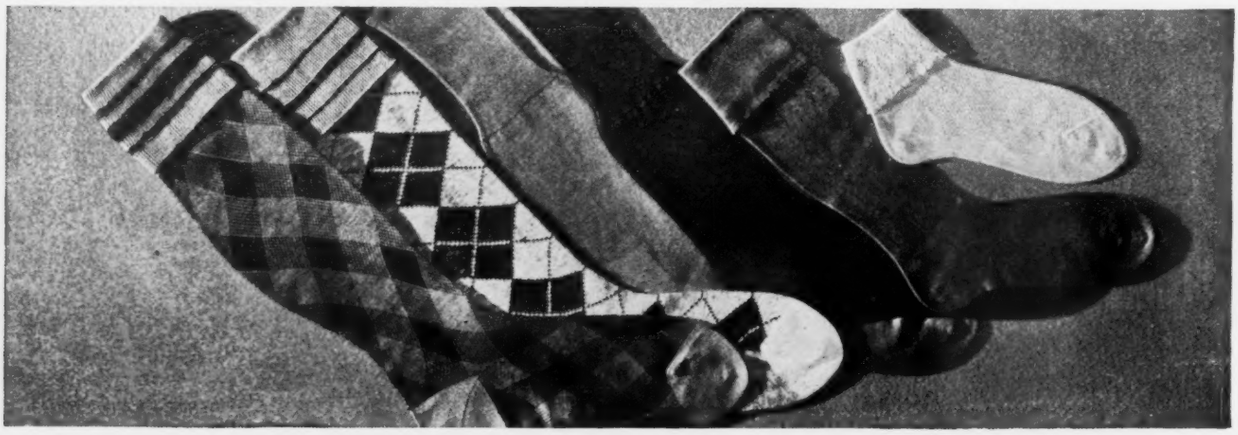
The durene stamp or label helps sell fine merchandise because the name durene symbolizes a definite standard of quality. Durene is the cream of the cotton crop, mercerized for extra strength, elasticity, absorptiveness and durability. Retailers and store customers naturally prefer it.

The durene merchandise shown here is from the following distributors: boy's underwear, at left, above, Globe Knitting Works; at right, McLoughlin Textile Corp.; man's pullover shirt, Ware Valley Manufacturing Company, Inc.; hosiery, from left to right below — patterned golf stockings, Chas. Chipman's Sons Co., Inc.; men's socks, James Jamison & Co.; children's socks, Shreve & Adams, Inc.

Durene
THE FINEST COTTON
QUALITY BEGINS WITH THE YARN

DURENE ASSOCIATION OF AMERICA
250 FIFTH AVENUE, NEW YORK CITY

MEMBERS: ABERFOYLE MANUFACTURING CO., PHILADELPHIA, PA. • AMERICAN YARN AND PROCESSING CO., MOUNT HOLLY, N. C. DIXIE MERCERIZING COMPANY, CHATTANOOGA, TENN. • HAMPTON COMPANY, EASTHAMPTON, MASS. • CLARENCE L. MEYERS, INC., PHILADELPHIA, PA. • SPINNERS PROCESSING CO., SPINDALE, N. C. • STANDARD-COOSA-THATCHER CO., PHILADELPHIA, PA.



bend the sinkers so badly that a good many will have to be taken out, especially on a lace machine.

Care of the Needle Beards.

Another condition has arisen since the advent of lace. On plain knitting it was the rule to have the clearance of the needle-beard equal to the thickness of the flat side of the needle. On lace knitting, however, it must be kept a little higher. It is advisable for the foreman to check up on needles straightened by the knitters so as to have them uniform throughout the entire mill. Knitters must also be sure to apply needle-oil to the needles, points, welt-bars, and transfer-bars when the machine is stopped, if only for a few hours. It is important that the knitters do not get the needle-beards too flat, due to the fact that the needle-beard is now being used a little higher it will mispress if it is too flat. On plain knitting, the take-up roller does not give the knitter much concern, but it is of vital importance on lace. Too much pull is just as bad as not enough. Both conditions will cause lace holes or drop-stitches. Dry silk is also another source of trouble. It not only changes the amount of tension on the needles, but the silk does not have the same elasticity on the lace points when transferring the stitch, thus causing broken needles and drop-stitches.

Uniform Temperature Is Important.

Temperature is another very important factor which is encountered, especially in the winter time. First decide what degree of temperature would be satisfactory for your plant conditions, keeping in mind the comfort of the knitters, and then maintain this temperature with a good relative humidity. A hygrometer should be used in conjunction with temperature control as well as thermostatic controls on all heating units. These thermostatic controls can be set very finely so that they take up on one or two degrees' variance, and the hygrometer can be watched each day to be positive that the engineer maintains enough steam to give good heating conditions.

In the summer, the machines must be protected from the direct rays of the sun in order to avoid a lot of unnecessary trouble due to expansion. Also there has to be some cooling apparatus in order not to have extremes in temperature. All of this can be accomplished through the maintenance department.

Machine Speeds.

On the late type of machines with their wide range of speeds which are so easily controlled, the knitters are often tempted to increase the speed while going through the splicing and heel. This is a very bad practice, and should be strictly forbidden. If the machine is using cotton splicing, bad plating will be the result. In fact, even if all silk is used in the splicing and heel, it will cause too much strain on the machine. Forty-four courses per minute seems to be the most practical speed to use when running through the splicing and heel. To increase that speed requires extra tight friction, thereby placing a lot of additional strain on the coulier motion. Due to the fact that

TEXTILE MACHINE WORKS, READING, PA.
LUBRICATING SCHEDULE.

TIME	PART	LUBRICANT
DAILY	Narrowing Points Needles	Stainless Oil (Needle Oil) Apply with soft brush before leaving plant. When knitting Ingrain fabrics clean oil off before using machine.
TWICE WEEKLY	Bearings Cam Rollers Carriers Carrier Rods Narrowing Spindles	Light Machine Oil Viscosity 180-220 sec. Saybolt at 100 deg. F. Pour Test 35 deg. F.
	Chains	Heavy Oil Viscosity 360-440 sec. Saybolt at 100 deg. F. Pour Test 45 deg. F.
	Grease Cups	No. 3 Cup Grease
WEEKLY	Dividers Jacks Narrowing Rods Sinkers Thread Guide Rods	Light Machine Oil
	Connecting Bar Cock Box Bar	Non-Fluid or Slow-Flowing Oil*
EVERY TWO WEEKS	Gears	Extra Heavy Oil Viscosity 450-550 sec. Saybolt at 100 deg. F. Pour Test 50 deg. F.
	Coulier Gear and Pinion	No. 3 Cup Grease
EVERY THREE MONTHS	Coulier Pan	Light Machine Oil
WHENEVER NEEDED	Splicing Shaft (Friction Box Rod)	Castor Oil Viscosity 1485 sec. Saybolt at 100 deg. F. Use old stock. Applied at discretion of knitter.

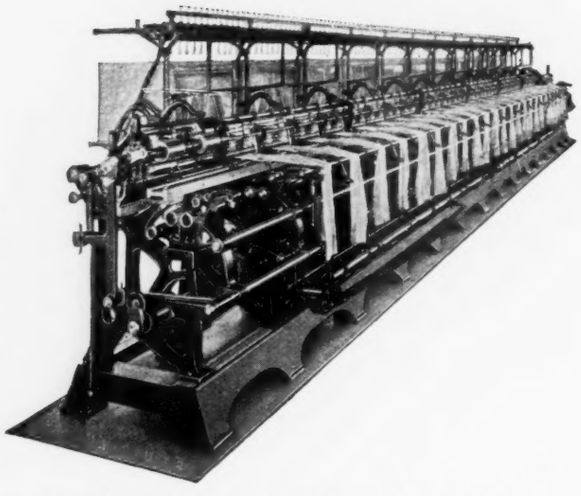
*A commercial oil possessing high adhesive and lubricating qualities.

time-study sets the rates in our plant, it is necessary to control the speed of the machines throughout the knitting operations. If the knitters are permitted to change the machine speeds, it immediately nullifies the accuracy of our time-studies, throws the rate off, and at the same time makes for poor quality merchandise. For this reason, the machine control is placed in the hands of the maintenance department through the electrician. It is his duty to check the machine speeds regularly, and report any variances to the engineering department after they have been corrected, so that the production on these machines can be checked.

A Machine Shop.

Naturally a well-equipped machine shop is essential where there is much machinery in operation. Fixers are handicapped when they cannot make quick and lasting repairs, For this reason we maintain a fully equipped machine shop, an illustration of which accompanies this article. Here we repair all broken or worn parts. We do not send any of our light work out to be done, only the very heavy parts. We also make all of our own cams for our lace work, and nat-

As easy as switching the light on or off

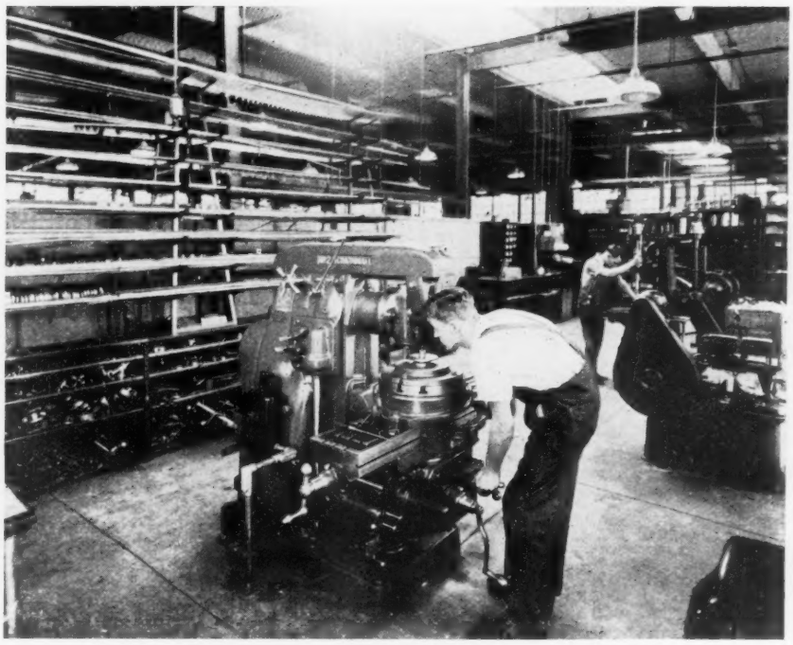


The operation of the slow-motion mechanism in the Wildman Full-Fashioned Hosiery Machine is simplicity itself. A child could do it. There's no muscle required. It's as easy as switching on or off the light.
Write for further information.

WILDMAN MFG. CO.
Full-Fashioned Division Norristown, Pa.

WILDMAN
THE WORLD'S STANDARD

WILDMAN
FULL FASHIONED HOSIERY MACHINE



A Section of Ajax's Machine Shop.

urally, make all other minor plant repairs right here in this section.

Cleaning of Machines.

The cleaning of machines is another question that is worthy of consideration while talking about maintenance. Conditions vary in different parts of the country. Some mills do not allow their knitters to start a set after 10:15 A. M. on Saturday and when the closing time is 12 o'clock, there is an average cleaning time of one and one-quarter hours. How much of that time is spent in putting in welt-hooks, end-needles, fixing transfer-bars, sinkers, and various other parts that should be taken care of during the regular working hours? How much actual time do they spend cleaning the machine? Is it any wonder that under these conditions that machines which have been running about six months look and act as though they have been in operation for at least six years? Some mills do not allow their knitters to start the machines after cleaning until they have been inspected and approved by the foremen. This is the method under which we operate; no machine is permitted to start up without a clearance slip.

There is another method which has proven very practical, namely having all of the cleaning done by a cleaning gang or crew. This gang should be composed of one man who is responsible, and two boys as helpers, and this is usually sufficient to take care of the average hosiery mill. The gang is equipped with a truck to hold the cleaning waste, kerosene, ammonia, alcohol, or other cleaning fluids; a dust-pan and brush and a floor mop to take up the oil in the floor-pans. A small, low, four-wheeled truck is also handy and can be used to sit on, and slide along while cleaning the lower parts of the machine. A broom is also needed to sweep the aisle when finished.

The knitter cleans the narrowing machine and picot bars, and if he is not finished when the other parts are all cleaned, the other cleaners can help him. Narrowing finger rods, picot-bars, carrier rods, and the slur-cock slide should be oiled before starting up. There is no reason whatever for this method to cause any confusion or dirt in the knitting department, as the cleaners keep everything with them in their truck.

Machines cleaned by this method need not be shut down more than 30 or 60 minutes, according to the type of machinery. This method is flexible and can be easily arranged to suit the size and conditions of the plant. If it is small, the man in charge of cleaning can also take care of the oiling. By using new and inexperienced boys for the cleaning, the employer has the opportunity of studying their adaptability before promoting them to other positions. Another advantage is that the machines are quite often stopped for various reasons, and this work can be done at that particular time.

After all, we have to consider: does the fact that a cleaner machine will eliminate stoppage and gummed up parts overcome the extra cost for the cleaning crew?

Real Estate Maintenance.

At five o'clock in the morning, the janitorial section of the maintenance department begins operations by scrubbing down thoroughly all the wash and rest-rooms throughout the entire plant, so that they are in spick and span order before the day-shift starts at seven o'clock. For the rest of the day, from that point on until four o'clock, we divide the janitorial crew up into different departments so that every section of the plant is gone over twice during the day. The last thing in the afternoon, the wash-rooms are again scrubbed thoroughly, and replenished with paper towels, and soap. We take a great deal of pride in our rest and wash-rooms, changing the paint on them every three months to a different color. The rest-rooms are very beautifully furnished in wicker furniture and afford the employees an opportunity to gain a few minutes' relaxation. They are also equipped with radios.

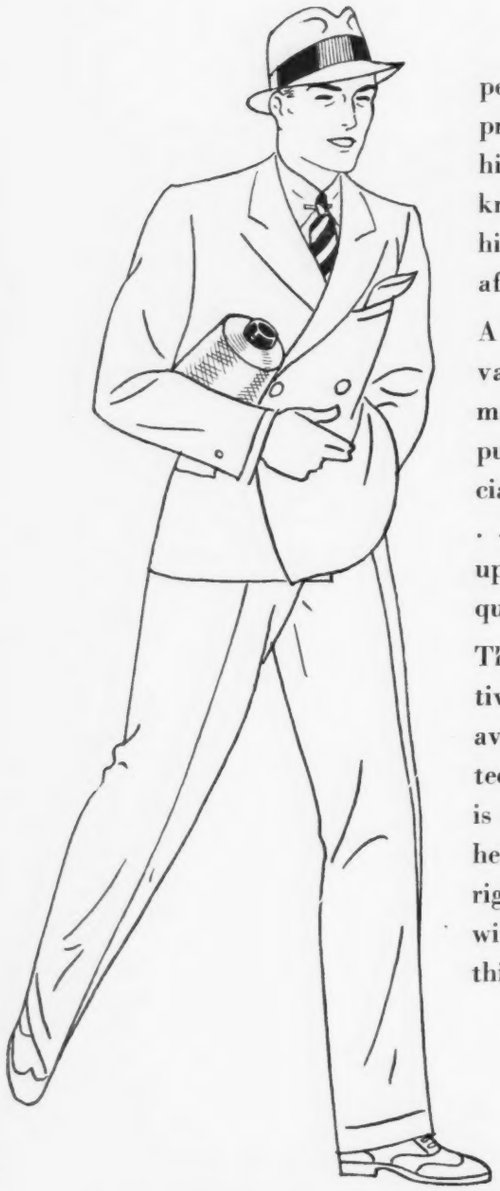
We make it a point to paint a certain section of the plant each week, so that during the course of a year, we will have painted the entire plant once over. We also scrub the entire plant with electrical scrubbing machines at least once a month, and certain sections which receive very heavy traffic are scrubbed at least twice a week.

We do not permit any jobs to be given to the maintenance department, except through one source, that

(Continued on page 116.)

When it comes to synthetic yarns

count on this man !



HE is the Tubize representative. He is an experienced yarn man. He is able to analyze a mill's yarn problems. He knows that to serve the best interests, both of his customers and of his company he must sell only yarns known to be suited accurately to definite needs. He carries out his company's merchandising policy of diligent cooperation after the yarn is delivered.

A factor helpful to the Tubize man and his customers is the variety of yarns he is able to provide. The Tubize company makes a yarn for every purpose . . . in all commercially important deniers . . . conditioned and put up to meet every mill requirement.

The Tubize representative, backed by every available resource, both technical and commercial, is at your service. He can help you make sure you are right before you go ahead with production plans for this and coming seasons.

TUBIZE YARNS

CHARDONIZE

SANCONIZE

CHACELON

SUNBEAM

It's in the yarn

TUBIZE-CHATILLON CORPORATION

2 PARK AVENUE · NEW YORK

MAKERS OF VISCOSE, NITROCELLULOSE AND ACETATE YARNS

Tubize BRAND

KNITTING KINKS

Practical Discussions by Cotton's Readers on Various Knitting Subjects

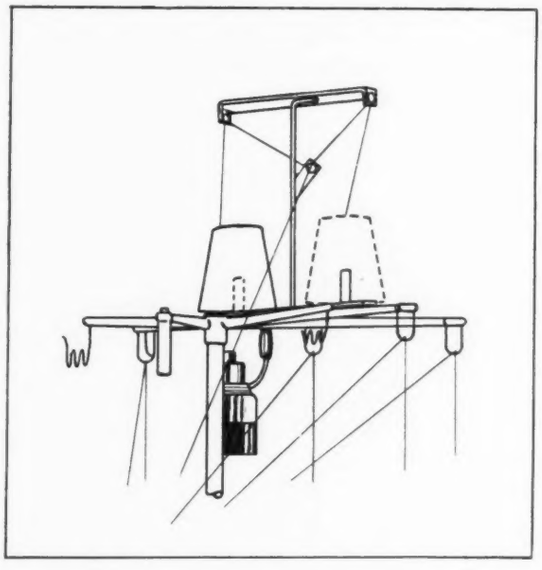
An Extra Holder for Heel and Toe Yarns.

EDITOR COTTON:

I would like to describe here a yarn holder which we got up for carrying the heel and toe yarns, which is fastened on top of the regular yarn guide. It is shown roughly in the accompanying sketch.

We made this device because we have been making hosiery of more colors and yarns than the machines had been built to hold. We had used several other methods to hold the heel and toe yarns on the floor and elsewhere, but we were always having trouble with the yarns running together or catching on something and breaking.

The materials needed consist of: two pieces of



sheet iron, 12 inches long, ½-inch wide and ⅛-inch thick; one piece of sheet iron 14 inches long; two pieces of cold rolled steel, ½-inch in diameter and 7 inches long; one piece of sheet iron 7 inches long, ½-inch wide and ⅛-inch thick; and three porcelain eyelets. Two cold rolled pins are riveted on the bottom to hold the yarn cones. The top cross piece is bent down at both ends ½-inch, holes drilled and the porcelain eyes slacked in. The upright in the center carrying this piece is bent over ½-inch at the top and bottom, and is riveted at the bottom. The short piece carrying the porcelain eye for the yarns to pass through is riveted on this upright piece about half way up. The whole arrangement is riveted to the top of the regular yarn stand.

CONTRIBUTOR No. 6087.

WE invite our readers to make use of this department for the discussion of any and all problems arising in connection with the knitting mill from the office to the packing and shipping departments. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. All questions will be answered as promptly as possible. The names and addresses of the contributors must be given, but will be held in confidence and a pen name substituted when printed. All acceptable contributions other than questions will be paid for after publication. The editors do not hold themselves responsible for any statements of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

A Parts Cabinet for Knitting Mills.

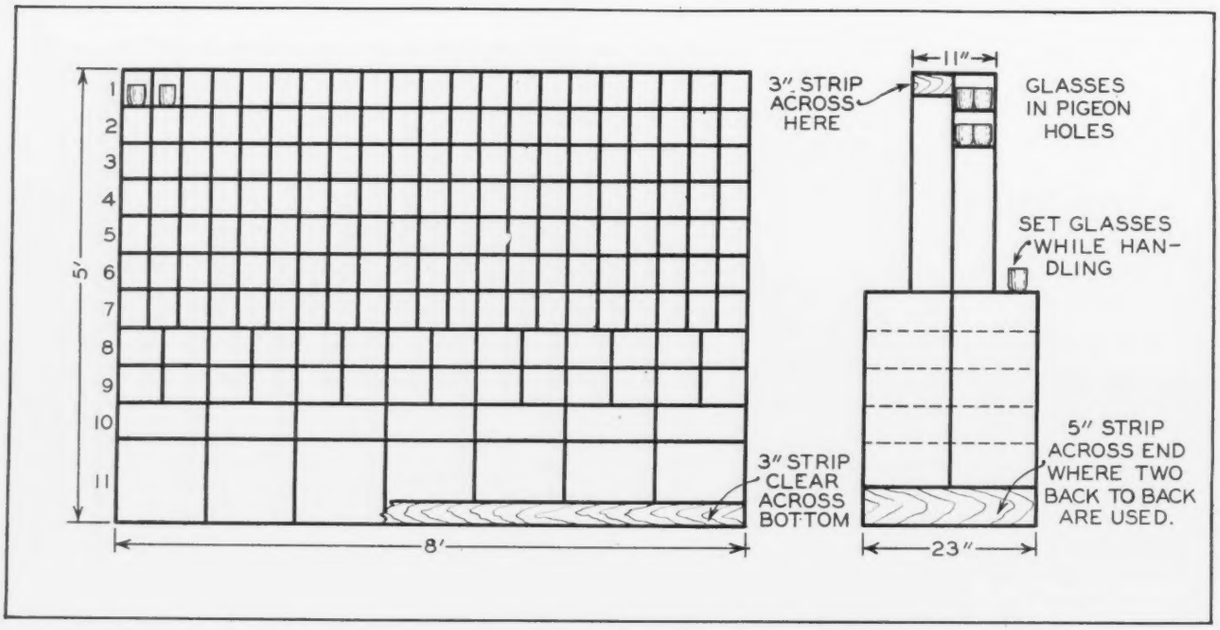
And some good suggestions for keeping track of how many of each kind of part is used.

EDITOR COTTON:

I would like to describe in this letter a very good method of keeping up with the parts used in a seamless hosiery mill. The ribbing, knitting and looping departments need "parts service" more than any other department so let us keep these three in mind; however, parts for the whole mill machinery can be handled in a like manner. First, we must know what we should have on hand; second, be sure we have it; and third, keep it in a place where we can see it.

The location of a parts department is important. It should be placed centrally between the departments that need this service most in order to avoid unnecessary walking and loss of time. In many mills it can be operated in connection with a machine shop for best results.

The sketch herewith shows a front and side view of a parts cabinet designed to save time and effort in accounting for and issuing parts. It will be found best to have this department in a room by itself, a good lock on the door with not too many keys to it, a service window or counter and a reliable (and if possible) a mechanically inclined person in charge.



A Convenient and Inexpensive Cabinet for Knitting Machine Parts.

By careful study the minimum of various parts kept on hand can be easily determined. Care should be taken not to stock up on parts which may suddenly become obsolete through changes in the kinds of goods manufactured; also a low inventory should be kept on expensive parts that are not used frequently. Perpetual inventories should be kept of all rib cylinders and dials, knitting machine cylinders and dials, transfer rings, etc. In this manner, a mill will know where it stands when changes are made and have a ready list of "for sale" parts. It is poor business to have a machine waiting for a 15 cent part and cause a $15.00 loss of time and production. Catalog names and numbers of parts should always be used, and most machine builders will gladly furnish a complete catalogue showing the parts names and numbers to order by and be able to discuss the parts intelligently. Many good machine fixers do not know the correct names for half the parts they use. In calling for new parts or trying to describe them for any reason in connection with their work they will more than likely say "This hickey so-and-so", "that 'trick' is badly worn" and "this jigger don't fit right". Now wouldn't a stock clerk be in a fine shape to give service if his bins and shelves were labeled with nick-names?

A good plan in connection with small machine parts which are used most frequently is to have a rack built with small spaces with each fixer's name assigned to one space. In order to get a new part he must bring in an old one and this is placed in his space. At regular intervals someone thoroughly familiar with parts can inspect them with the fixer and thus find out if the parts were actually worn out, broken because of defects or abuse, or scrapped because someone didn't know, care or appreciate the cost and value of new parts. How many parts are scrapped through carelessness and what nice collections of junk can be seen in many fixers' tool boxes or work-bench drawers!

If the superintendents reading this have not checked up on this recently, let me suggest that they do so today, as they will be surprised. A system of checking up on returned parts will help to determine the amount to keep on hand and will also show whether one man uses more of some certain parts than another on like machines and under the same conditions.

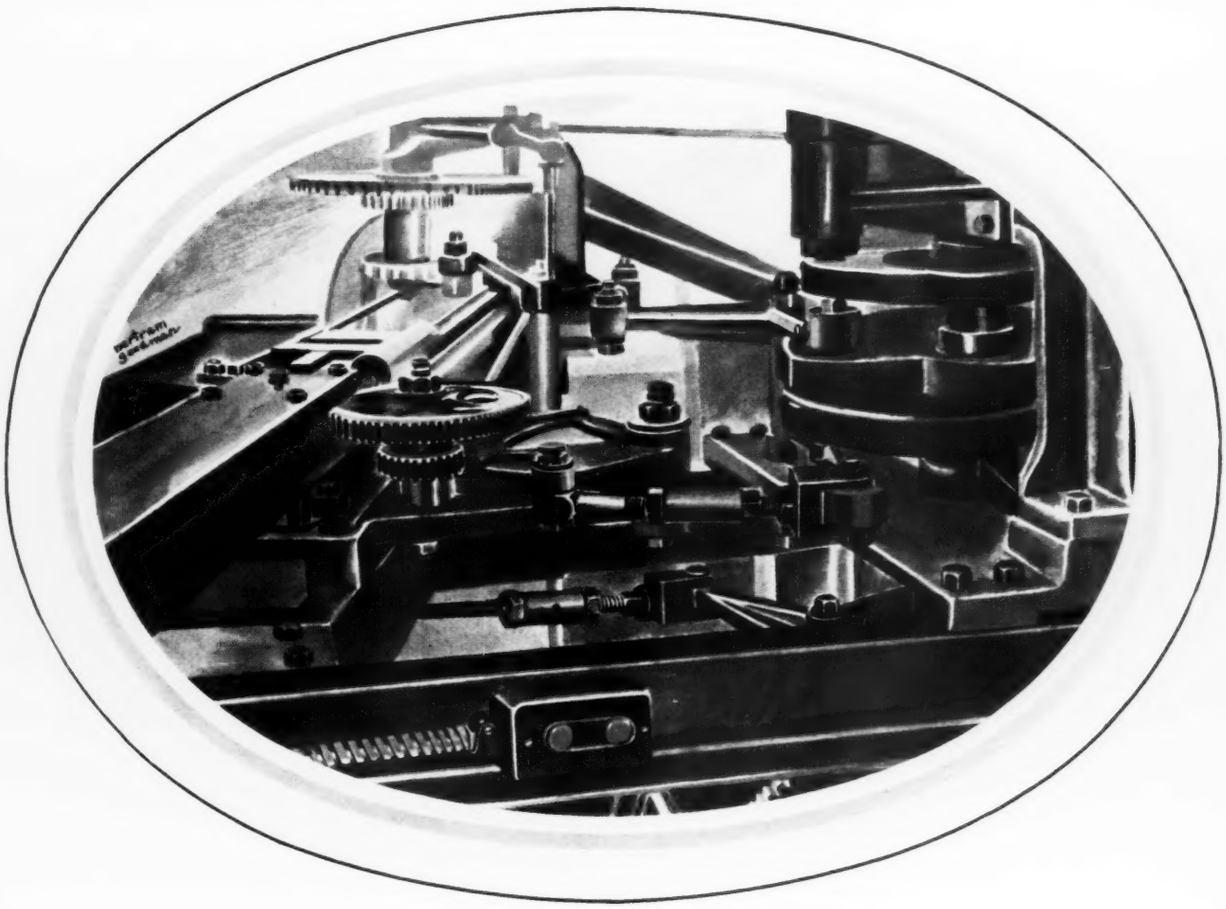
We all know where parts come from but do we know where they go to? Many parts such as screws, bolts, nuts, etc., are exactly alike on various kinds of machines and can be ordered from one source and kept in one place rather than have little dabs all over the mill. This alone will save time and avoid a duplication of effort in many ways. It costs more to have a good fixer looking for parts than it does to have a stock clerk to do it.

A well managed parts department will help to create respect for their usage, save time, effort and money in many ways. Perhaps the "Chief" will ask for an accurate new and used parts inventory on June 30th, we will say. Could you get it easily and quickly, or would it be one of "those things"?

The sketch shows how to build a cabinet especially suitable to keep circular machine parts where they can be seen and easily found. Many mills have several diameters of machines of the same kind or several kinds of machines and therefore need ample storage space. By using two glasses in one space, parts that come right and left can be kept together. By starting at the top with small diameter and getting larger going down, the various sizes and kinds of parts can be grouped, screws, bolts, cotter keys, etc., could be arranged in the same manner. An ordinary jelly glass with a tin cover is best for this purpose. It will keep the contents from rusting.

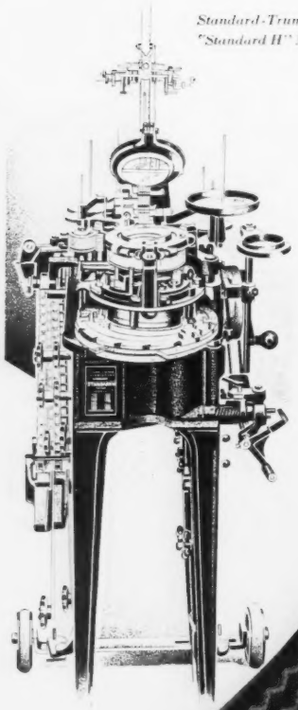
The "shelf" formed by the difference in width of the upper and lower half provides a place to set glasses while handling them.

The bins become larger toward the bottom to accommodate larger parts and avoid top-heaviness. The



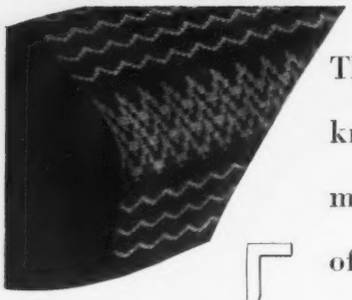
"To err is human" . . . so humans are not depended on to make Torringtons. These are machine-made needles . . . absolutely uniform, accurate in every dimension . . . always. Remove one more "variable" from your production problems by keeping all machines all-Torrington equipped.

TORRINGTON *SPRING BEARD* NEEDLES



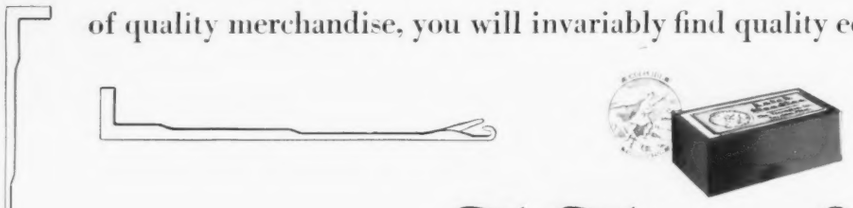
Standard-Trump Bros.
"Standard H" Machine.

"BY THE COMPANY THEY KEEP"



Holeproof Hosiery

This sock was made by the Holeproof Hosiery Company. It was knit on a Standard-Trump Bros. "Standard H" machine. And this machine, of course, was equipped with Torrington needles. Back of quality merchandise, you will invariably find quality equipment.



The Torrington Company

ESTABLISHED 1866

Torrington, Conn., U.S.A.

BRANCHES:

THE TORRINGTON COMPANY,	1640 FAIRMOUNT AVE.,	PHILADELPHIA
THE TORRINGTON CO. INC.,	140-144 W. 22ND STREET,	NEW YORK, N. Y.
LOS FABRICANTES UNIDOS,	964 CALLE BELGRANO,	BUENOS AIRES

FACTORIES AT:

TORRINGTON, CONN. • UPPER BEDFORD, QUEBEC
COVENTRY, ENGLAND • AACHEN, GERMANY

TORRINGTON *Latch* NEEDLES

name and number of the parts can be written on a strip of card-board and tacked to the bin. The cabinet should be built in units to be set against the wall or back-to-back in pairs with aisles between if the stock room is without wall space; that is, an inclosure in the middle of a large room. The strip across the bottom keeps sweepings out and stiffens the cabinet in case it must be moved. Any carpenter can build it and the cost is not high.

CONTRIBUTOR No. 6085.

A Handy Specification Card Holder.

EDITOR COTTON:

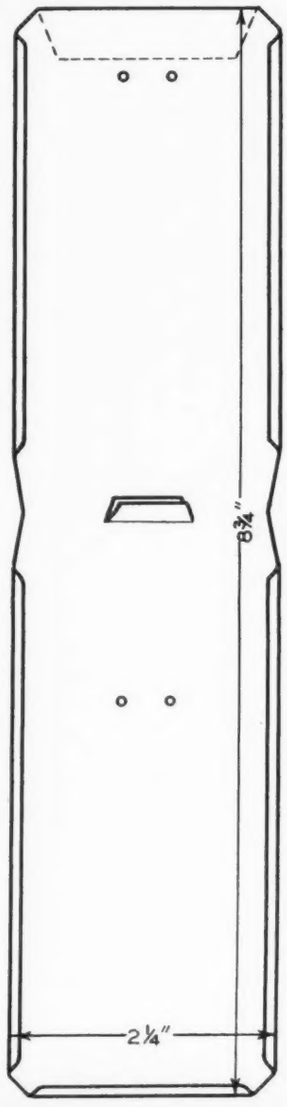
I think your "KNITTING KINKS" department provides a splendid medium through which we knitting mill men can exchange ideas and information of value to all of us. Perhaps some of your readers are not taking advantage of this, and not contributing their part, because they feel, "Oh, well, I've got nothing here that everybody else doesn't already know about." To them I would like to point out that one never can tell when he can be of help to another fellow; what's old stuff to one man may be brand new to another fellow in another location. I hope, therefore, that more of your readers will bear this in mind, and send along discussions of things that have helped them out. I can tell them something else: that by doing this they will derive a great deal of satisfaction from having contributed something to the department which gives them a good idea occasionally because some other man, some where, took the trouble to send in a letter.

Along this line, I want to tell about an idea we have been using that is a great convenience to us. Until a short time ago we had no system for tagging our rib machines so that all of the needed information as to the fabric being made was available. In the accompanying illustrations, I am showing the Machine Tag (giving the necessary information as to the machine) and the Specification Tag, which gives us what we want to know about the work in process. Also shown is a holder for these cards, made out of medium weight tin, cut and bent to shape as shown. This cost us practically nothing, and gives us a convenient, uniform system of providing, at a glance, all of the necessary information.

CONTRIBUTOR No. 6069.

SPECIFICATION TAG	
STYLE 2	SIZE 9
YARN, 200/2.	
YARN	
COURSES.	32
LENGTH	30"
COURSES	
LENGTH	
DATE 4-1-32	

MACHINE TAG	
MACHINE	Wildmere
DIAMETER	4"
NUMBER OF NEEDLES	172
CYLINDER NEEDLES	7-42
DIAL NEEDLES	10-42



Causes of "Hairy" Needles.

EDITOR COTTON:

Back in the July 1930 issue, "CONTRIBUTOR No. 4718" asked what causes "hairy" needles. This is a new term to me, but I imagine he means what causes needles that cause fuzzy streaks in the hose. I have found that there are several rather common causes for this, such as rough needles, loose rivets, etc., but one thing that I have found that seems to me to be a little out of the ordinary is sinker heads being out of alignment. I have had several machines to make hose with fuzzy streaks that stood out like a sore spot, and upon lining up the sinker heads the trouble would be removed.

I hope this little suggestion will prove of some benefit to your inquirer.

CONTRIBUTOR No. 4910.

A Method of Marking Dates.

EDITOR COTTON:

While reading over the "KNITTING KINKS" department in COTTON yesterday, I came across a letter from one of your contributors which presented to me a new slant on this business of contributing to your magazine. Like so many others, perhaps, I had taken it for granted that most of the information you publish was specifically asked for, and that I knew nothing that would be of startling value to anybody else. This fellow, however, pointed out that what is old stuff to one man might be brand-new to somebody else. Also, I can see how much more valuable it is for your readers if your information comes direct from mill men like us.

I am therefore going to take a shot at describing for you a plan which we have been using for some years. As I indicated, it might be that everybody

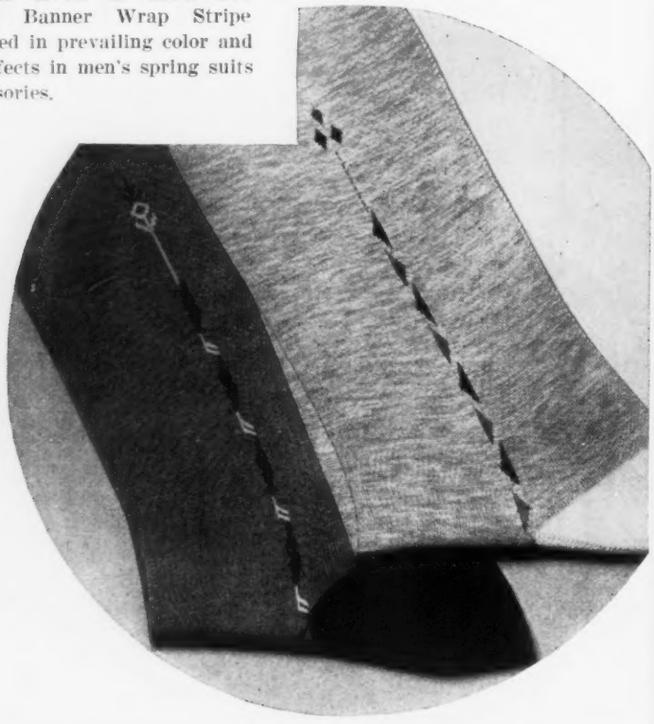
Smart retail promotions keep BANNER WRAP STRIPES *busy*

BROADSTREET'S, NEW YORK at FIFTH AVE. & 32nd ST. Displaying Banner Wrap Stripe lisles, styled in prevailing color and pattern effects in men's spring suits and accessories.

PITMAN, *of Laconia, reorders battery of* BANNER WRAP STRIPE MACHINES

Pitman Mfg. Co., of Laconia, N. H., have placed their third order for Banner Wrap Stripe Machines; reasons—1. They find the machines are adaptable to all style requirements. 2. They find a good demand for well styled wrap stripe hosiery, and 3. They find (we take it) the Banner Machine best suited for this profitable purpose.

Pitman is one of a number of mills which have recently added to their existing Banner Wrap Stripe equipment. The Banner is a time tested wrap stripe machine. Since its introduction four years ago it has been constantly improved to meet changing market conditions so that to-day it stands as the most practical machine on the market. The bulk of wrap stripe hosiery in the leading retail stores to-day is made on Banner Wrap Stripe Machines.



Banner Wrap Stripes in lisle, made by Pitman Mfg. Co., sold by Amory Browne, 31 Thomas St., New York, and featured by style conscious retailers everywhere.

Frank Comment on the Retail Half-Hose Situation

We admit that there are instances of Wrap Stripe hosiery finding its way into the 10c stores. But how is this to be reconciled with the fact that large quantities of Wrap Stripe hosiery are to-day being promoted over the counters of leading American retailers?

The point is this—the mills manufacturing for the 10c trade are *not* the busy mills; while the mills which trouble to style and promote their wrap stripes are running full time, adding to their wrap stripe equipment and showing profit.

When you examine the hosiery sold in these two types of outlets you find the difference is not so much in fabric as in styling. Running a hosiery mill to-day without a trained stylist is like crossing the ocean without a navigator. To-day you have to have style—not just new patterns, but fashion-right merchandise.

We can take you to a number of stores getting good prices on large turnovers of Banner Wrap Stripe hosiery. We can name a convincing number of mills that are having difficulty in meeting demands for their merchandise—a demand strong enough to leave no doubt that it pays to *style* and promote a wrap stripe hosiery line. Even in to-day's market? Yes, *especially* in to-day's market!

If you have a styling problem in connection with your wrap stripe production, why not talk it over with us? We'll do our level best to help you solve it.

John Dawson

President, Hemphill Company.

NEEDLES, SINKERS, JACKS, LINKS and PATTERN SUPPLIES **immediately available at all Banner branch offices.**

HEMPHILL COMPANY, PAWTUCKET, R. I.

General Sales Offices & Machine Exhibit 93 Worth St., New York

Philadelphia
6822 No. Gratz St.

Chattanooga
James Bldg.

High Point
Commercial Bank Bldg.

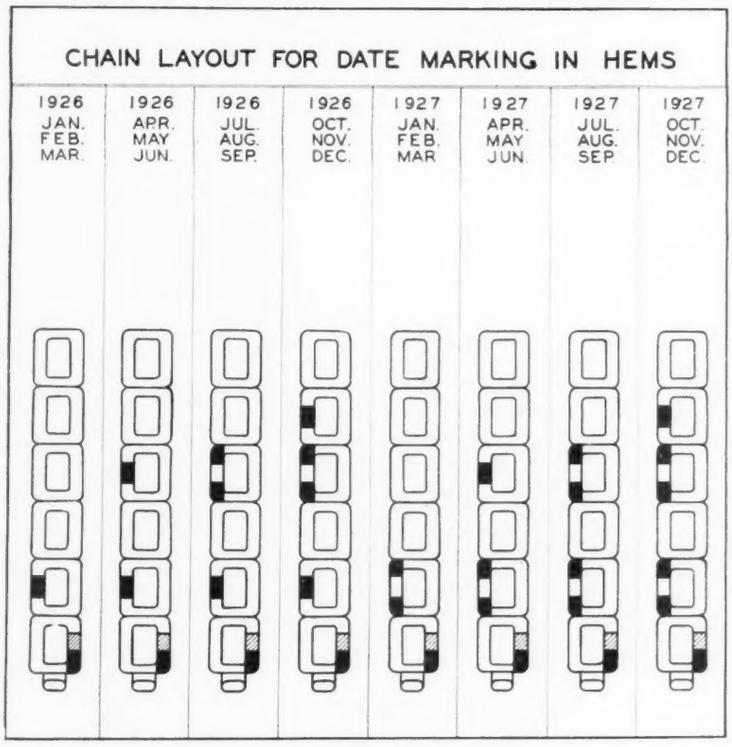

CHAIN LAYOUT FOR DATE MARKING IN HEMS
1926 JAN. FEB. MAR.
1926 APR. MAY JUN.
1926 JUL. AUG. SEP.
1926 OCT. NOV. DEC.
1927 JAN. FEB. MAR
1927 APR. MAY JUN.
1927 JUL. AUG. SEP.
1927 OCT. NOV. DEC.

FIG. 1

FIG. 2

knows about it, and then, again, there may be somebody who is looking for this very thing. If anyone finds it of value, I would be glad to know about it.

For the purpose of knowing when certain production was made on our seamless machines, a system of tuck stitch markings was originated, on the inside of the hem of our hose. Once every three months we change a designated number of fashion mark links in the chain which makes the inside of the hem. This information is of importance for obvious reasons. It comes in handy in grey stocks, finishing and shipping departments. The plan could readily be adopted or changed to suit most any mill.

Fig. 1 shows our chain lay-out for a three-year period, of which we made a drawing and then had blue-prints made in a size convenient for filing. Fig. 2 shows this same lay-out, but from the viewpoint of how it would appear on the hem. This system has been in use in our mill over a period of years and has been found practical.

CONTRIBUTOR NO. 6070.

Some Thoughts for and About Understudies.

EDITOR COTTON:

An understudy should be a young person. Now do not mistake me when I say a young person, and think that I mean a youngster who doesn't understand his or her position. This position of understudy is not a mere job, but is a starting place toward a larger and better job. Every overseer should have some one in his room whom he can bring up. For some day he is going to pass on to another job or out of this world, and every man should have been training someone to succeed him.

In the mill, it is more than likely than a young man will be chosen as an understudy. I should like to discuss the subject from his standpoint.

Every young man should try to fit himself for the better job that is surely ahead of him. One of the first things he should do is to get a fair education. Now, I know some will say, "I never had a chance to get an education." This probably was true with some men years ago, but now-a-days, with all of the opportunities provided by the states and manufacturing companies, there is no such excuse.

Now, when you put education and experience together they are doubly valuable. A manufacturing concern today is looking for the best men—both in education and experience. There is more to education and experience than knowledge of tools and machinery. There is the experience of handling the help. I think that every understudy should have some experience in handling help before he is given the job of overseer. Because all three of these things go together to make a successful overseer.

And there is one point I was about to leave out. An understudy should never get the big head, so to speak, and think that he is "above" everyone else. For there is always someone just as good as he is.

Now, looking at it from the other side, the overseer should be an example and a teacher to the understudy. He should instruct the understudy about the machinery, the help, and the processes of manufacturing. The superintendent or overseer should pick their understudies from the best of young men. We all want to run our jobs better. The company should co-operate with the overseer in teaching the understudy, for it is to their advantage as well as to the benefit of the understudy that he be prepared to fill the job ahead of him.

CONTRIBUTOR NO. 6076.

Evolution

It is interesting to note how closely the growth of the Full-Fashioned Hosiery Industry parallels developments in "Reading" Full-Fashioned Knitting Machines.

New—exclusive "Reading" patented Improvements in Design.

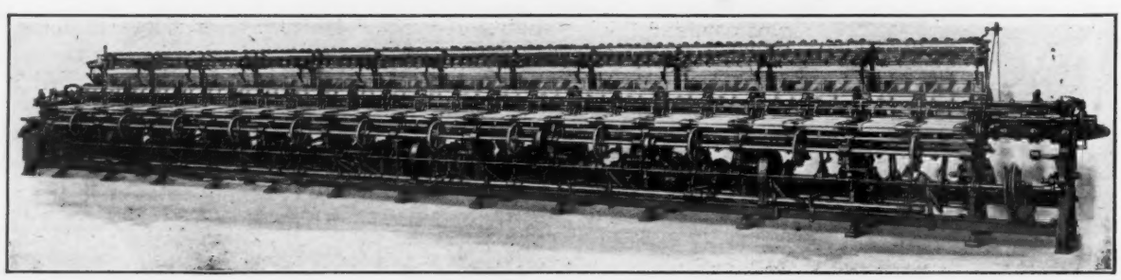
New—exclusive "Reading" patented Attachments for Mesh and Lace.

Twenty new exclusive "Reading" patents now pending.

Detailed list on request.

Note: "Reading" Improvements are protected by patents and will be enforced against infringement.

TEXTILE MACHINE WORKS
Reading, Pa.



The KNIT GOODS MARKETS

THE hosiery industry has been going through a month to six weeks of house-cleaning. During the severe curtailment of production, beginning in the latter part of April, holdings of much of the higher price hosiery have been passed to retailers. Manufacturers liquidated cumbersome holdings of slow moving goods, making painful sacrifices for reducing their inventories and working into a position for taking care of maturing silk accounts and turning to advantage opportunities for acquiring silk at around the lowest prices of record, besides clearing the decks for action along possibly different policies when, during the usually dull summer, the fall campaign will be shaping.

A specimen of putting draggy mill stocks into distribution was seen about the middle of May in a sale of women's high grade ingrain silk stockings by a New York department store, for 77 cents a pair, for around 18,000 pairs from a manufacturer who has for the time discontinued the production of ingrains, to manufacture only dip-dyed. The ingrain silks were offered at retail at a half to a third of the ruling prices a year ago. They embraced also fine gauge numbers which are readily obtainable for retailing at a dollar a pair for plain knitted dip-dyed of standard construction.

Although mills have unloaded considerable quantities of full-fashioned silk stockings since the beginning of May, and notwithstanding an apparent decline in output during that period, making comparison with March, this may not mean as great a reduction in stocks as might appear, as is deducible from an incident which but recently came to light. In March, 1930, a Philadelphia department store made a purchase of a fair size lot of stockings of high grade silk and standard construction at a substantial shading from the established price of a nationally known mill. They seemed at the time such extraordinary value that they were put in stock at the store's price for its better numbers. They did not move, and in March this year were included in a special sale for effecting a clearance. They were priced on the basis of $4 a dozen less than the store had paid for them two years before.

Inventories as disclosed in Department of Commerce reports and surveys by trained statisticians do not, unfortunately for manufacturers, embrace goods in stock among wholesalers and retailers. In the case referred to, the mill is understood to have suffered no loss, and at that got rid opportunely of a type of stocking, distinctive with this establishment, that had lost its consumer appeal.

Since the beginning of May, mesh hosiery of varying grades and types of construction have been fed out, in great extent at a loss to mills. They have continued to be bought by some shoppers, so that dealers may have been left with virtually no holdover stocks. But there linger in some of the stores disturbing stocks of full-fashioned mesh hose and in other retail establishments there are holdings of the cut-and-sewn which are the more difficult to dispose of from the fact full-fashioned numbers are, in some instances, being offered at sensational reductions.

Why women "plunged" as to mesh hosiery and why the vogue faded after a few months of profitable manufacturing and selling can be answered on the theory that cheap meshes made the good ones appear commonplace, and that there really is no accounting for woman's whims in matter of style. Among manufacturers of the recently popular types of full-fashioned meshes there lurks an opinion that interest in this class will be revived. Some of the disappointed factors charge a manufacturer in the Schuylkill Valley district of Pennsylvania with prematurely beginning the unloading that all felt was certain to take place eventually. This manufacturer is said to have alarmed several key position buyers for the trade by reducing his prices in April. When his action came to be talked about in the trade, other manufacturers revised their quotations and the mesh vogue there and then was doomed earlier than most manufacturers had contemplated. An important jobber still distributing fair quantities of popular price silk hosiery recalled that his establishment cleaned up its black heel leftovers at a loss of $3.40 a dozen, and he bought no more meshes.

There has been heard some discussion of what manufacturers who had invested in mesh and lace tackle for attaching to full-fashioned machines will do with it, in the event lace stockings do not prove the success that was predicted for them. That may be answered by those in the trade who are credited with the ingenuity for creating innovations for taking the place of the passe. Besides, lace construction for the higher price brackets for an element that dotes on the distinctive still is regarded by some factors as promising—that is, provided an alleged weakness in fabric, at a point of greatest strain, shall be overcome.

Will Clocked Hosiery Replace Mesh?

A prediction that clocked hosiery will play a part in filling the void left by the partial departure of meshes is heard. Some profess to regard such a forecast as bordering on the ridiculous. Probable it is, however, that some one will have the temerity to bring back clocks for fall and that woman will decide. Paris clocks are shown in some of the leading department stores where customers pay the higher prices, and according to one well known hosiery department manager, sales, while not large, justify their addition to the store's line.

Innovations and novelties seem a necessity for escape from withering competition in plain silks of

SOFT AND WHITE

B&C

MERCERIZED YARN *for* UNDERWEAR

THE softness and whiteness of B & C Mercerized Yarns for the knitting of undergarments is no accident.

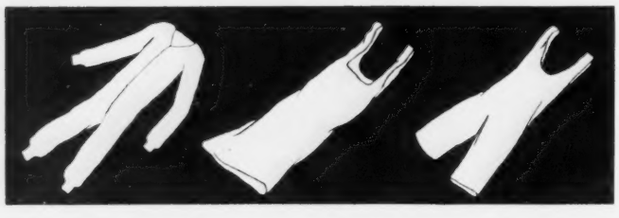
From virgin cotton to the finished product every step of production is guarded by B & C engineers and yarn specialists . . . each skilled in the art of producing top-quality mercerized yarns.

All B & C Yarns are the result of a sincere desire to spin and process the finest mercerized yarns which science, skill, modern equipment and careful workmanship can produce.

B & C quality is not an accident. It is a policy.

Call for a representative to explain to you further the exceptionable features of B & C Mercerized Yarns.

B & C Yarns are procurable: MERCERIZED, NATURAL, GASSED, PRESHRUNK, BLEACHED, and in COLORS.



BOGER & CRAWFORD
J and E. Venango Streets, Philadelphia, Pa.

FRENCH CAMPBELL, JR., CO.
417 Provident Bldg., Chattanooga, Tenn.

DONALD R. JONAS
Lincolnton, N. C.

WILLIAM R. RIETHEIMER
222 W. Adams Street, Chicago, Ill.

the long-time staple construction, in even the finer gauges. As a matter of fact, however, gauge means little in hosiery descriptions unless accompanied by details as to number of needles actually used in the bar, number of courses, grade of silk and a variety of items which to the average shopper would mean little in the absence of a store's guarantee. A widely advertised brand was the feature of a recent special sale of considerable magnitude. Chiffons were priced 69 cents and medium service weight 88. Gauge was not mentioned in the description. The brand was one which might have been a product of either a 39-, 42- or 45-gauge, as it is the trademark of a mill knitting the three gauges. The stockings presented the picot and the chiffons were of the French heel and cradle foot type.

Brand and price sold the stockings, which may be assumed to have been of first grade. Gauge, if thought of by the customer, had to be left to inference. There were no 39-gauge stockings in the lot of ingrain silk at 77 cents a pair.

The buyer for a nationally known New York department store who was quoted recently in a trade publication did not help market conditions for either manufacturer, dealer or consumer, by stating in effect that "a dollar stocking should be made on machines of 48-gauge and finer."

Probably the chief reason for this buyer's suggestion was his desire to more sharply differentiate the dollar kinds from stockings offered freely to be sold for 50 cents. Neither would be awarded a medal for real service. But the patron of fine hosiery will pay a dollar for 48-gauge less reluctantly than the average buyer of 39-gauge and some types of 42- would pay 50 cents for either of the latter.

A leading southern manufacturer commenting on the suggestion of a 48-gauge for a dollar stocking takes the position that a "real quality 45-gauge is the ideal dollar stocking, provided it contains premium grade silk and is made up to very high standards. Too many mills," he says, "are grinding out stockings as sausage is ground out every year about hog-killing time." Another manufacturer in a southern city, commenting on inquiries from buyers occasionally for dollar stockings contrasts quality with "most of the stuff that is offered."

As perhaps blasting the hopes of manufacturers featuring 45-gauge hose properly made from high grade silk as the ideal dollar a pair goods, the Corticelli Silk Co. is offering a three-thread silk 48-gauge chiffon number of grenadine construction at a price to dealers which permits "retailing profitably at $1 a pair." Made with self-picot top, shadow welt, cradle foot and tailored French heel, this stocking possesses the merit of distinctiveness as to price and is immune from the competition that has enmeshed gauges 45, 42 and 39.

A Philadelphia-made stocking from a mill selling its finer gauge goods under its nationally advertised brand goes to retailers at around $4.25 a dozen, for 39-gauge, other descriptions omitted. The purpose of the mill in offering this stocking is to supply its trade with 50-cent stockings which they otherwise would buy from manufacturers specializing in price hosiery and who might eventually "horn in" with the finer gauges. The mill using its brand for fine gauge claims that in selling the half dollar stocking unbranded, it simply is protecting its business in dollar numbers, and the management figures this one of the strongest attacks that can be made on price cutting manufacturers of coarse gauge stockings skimped for price.

Non-Runs, Run-proof and Other Patents.

What is described as a new way of fashioning a stocking is covered in a patent of Edmond H. Belber, the Belber Silk Hosiery Co., Philadelphia, which is assigned to Fashionlox, Inc., a Delaware corporation, a holding company for the patent. It has been in production for some time and, it is stated by Mr. Belber, will be manufactured by a number of mills under license. The invention provides a method for seaming along the selvage edges by which there is effected a change in the appearance of the area containing the fashioning marks in the present general form of fashioning.

A patent issued May 3 to Abram Carson, trading in Philadelphia as the Grand Hosiery Co., provides for a piece of shaped fabric sewn into the welt for distributing over a broader area the strain from the garter clip, which grips the fabric instead of the stocking direct.

Of first interest in the field of patents affecting hosiery construction is the Schwartz invention controlled by the Textile Patents Corporation, for knitting a lock stitch by which danger from runners is eliminated. Machines perfected by the Textile Machine Works, for knitting non-run stockings, have been in operation in the demonstrating room of the compay's works at Wyomissing, near Reading, for some weeks, producing on a commercial basis. Recently a battery of the machines were erected in the mill of the Apex Hosiery Co., in Philadelphia, whose president, William Meyer, is president of the Textile Patents Corporation. These machines also have been in production, on a commercial basis, since around the middle of May, the expectation being at the time they were ready for operating that non-run stockings made under the Schwartz patent will be on the market by the middle of June.

The Textile Machine Works has been steadily engaged for some time on parts for a number of machines for knitting non-run hosiery, and it was the intention of the Textile Patents Corporation that as these parts are ready for delivery to mills, a number of manufacturers will be licensed to knit and sell this type of stocking. The corporation maintains that the Schwartz patent and other patents already issued and applied for "completely dominate the practical and successful manufacture of non-run hosiery."

Non-run hosiery knitted on full-fashioned machines seems certain to be a subject of litigation, for, although the Schwartz patent was issued in 1923 and has been applied to the production of hosiery commercially, what is said to also be non-run fabric stockings of virtually the identical stitch have

Between the Wire and the Needle

At Royersford the tempering of springbeard needles is an art — not a process: an art learned back in the Old Country fifty years ago, and guarded zealously from the inquisitive eyes of "outsiders."

It isn't easy to do even when you know how. A trifle too soft, and an uneven fabric results. A fraction too hard, and it isn't long before a 7,500 dollar machine stands idle with broken needles to replace.

Think of the responsibility resting upon the microscopic shoulders of these tiny strands of steel! And think how necessary it is to have them right — to a degree!

ROYERSFORD NEEDLE WORKS, INC., ROYERSFORD, PENNSYLVANIA

ROYERSFORD NEEDLES

STANDARD STEEL AND DURAKROME

been produced by the Miller Hosiery Co., near Philadelphia. According to trustworthy report, this company has been operating full time for several weeks in producing its run-proof stocking, and it was stated the object was to put a sufficient quantity into a leading New York retail store for a demonstration, with the idea of having it appear as the first stocking of this type to be offered to the consuming public. The Miller non-run stocking is said to be made under the Graenz patent, which was issued quite recently.

Each claimant to exclusive rights in the non-run stitch has been careful to guard from the other all knowledge of what was taking place preliminary to the expected battle over alleged infringement. That there are to be "fireworks" in the hosiery trade before the Fourth of July seemed last month to be assured. In fact, displays from hitherto unexpected quarters loomed as a possibility, since it became known that each of several manufacturers who had examined a Schwartz patent stocking was at work trying to produce a run-proof fabric by a different stitch.

This much is admitted: The stitch covered by the Schwartz patent, which has lain dormant nine years, makes an impossibility of runners in the fabric. A representative of COTTON was an observer of Textile Machine Works machines in actual operation, legger and footer performing in the regular way, and their product was given every known test for showing absolute immunity from runs. What purported to be a non-run stocking was shown several weeks ago by a leading hosiery jobber. Submitted to simple tests, it was proved that runners might start from a break in the fabric and take an upward course, while a downward runner was an impossibility. This was a modern type of lace stocking, and when it was shown to a buyer and rejected because not absolutely run-proof, the salesman said "A woman can cause any stocking to run." He had not seen an attempt made with either the Schwartz patent stitch stocking or that produced with the Graenz patent.

Berkshire Stops Marking Irregulars.

Announcement by the Berkshire Knitting Mills that, beginning May 1, it would discontinue shipping its irregulars under a stamping to distinguish them from first grade stockings, was the cause of a short lived sensation. The Berkshire gave up trying to protect buyers from sellers of irregulars represented as firsts, after it found it simply was holding the bag for mills which make no pretense of stamping their off-grades. The company received vociferous applause from numbers of manufacturers when first it entered upon the "noble experiment", and learned later that much of the applause was camouflage. It is doubted that the experiment will again be undertaken.

Many buyers buy irregulars to be mixed with firsts, all to be sold at a low average price, and of course will buy none with the distinguishing marks. Some say their customers buy irregulars for gift purposes and of course would not permit themselves to be humiliated by knowingly presenting anything but perfect stockings. Other buyers of irregulars, as was demonstrated quite recently in a large retail store, leave it to the store's customers to detect the deception. If there were no irregulars and "seconds" it might be less difficult to find all-around honesty in the hosiery business. "Do you sell these stockings as irregulars?" a saleswoman in a large store was asked in reference to an aisle offering of which she was in charge. "When a customer asks about them," was the reply.

There is said to be a possibility that sellers practicing deception in the matter of exploiting irregulars at prices little less than those for first grade are to be smoked out when the information clearing house to be established by the National Association of Hosiery and Underwear Manufacturers begins functioning.

The committee working out a plan of procedure by which to maintain an exchange of information for protecting co-operating manufacturers against buyers' sins of commission and omission, had its initial meeting in May. It has undertaken to effect an organization such as was contemplated two years ago when Julian Armstrong came East from Chicago and met several groups of manufacturers. This effort followed by about two years a meeting called in Philadelphia by J. H. Makem, of Boston, associated with a hosiery mill in that city. Both Mr. Armstrong and Mr. Makem succeeded in arousing much interest in their suggested cures for the maladies of the hosiery trade, but their prescriptions were never given a trial and the patient lingered. After floundering several more years in the quagmire of an oversupplied market—and supplies increasing while consuming power decreased—the industry, as evidenced at the annual convention of the National Association of Hosiery and Underwear Manufacturers in April, is ready to hear from a committee made up of other than manufacturers or professional organizers. It consists of Stanley B. Hunt, the Tubize Chatillon Corporation; Virgil Jordan, the McGraw Hill Publishing Co.; George Sommaripa, the Silk Association of America, and Dr. George W. Taylor, of the Industrial Research Department of the University of Pennsylvania.

Dr. Taylor, by the way, stated some weeks ago that he was about ready to begin another survey for ascertaining the number of full-fashioned hosiery machines installed in American mills in 1931, and a separate inquiry by which to make an analysis of the equipment by gauge, section, speed, age, etc., in place this year. The latter will be the first survey to perhaps reveal the number of machines equipped for knitting mesh and lace hosiery and the new non-run types.

An analysis of the hosiery statistics of the Department of Commerce for March might leave the inference the decline in demand in May may have been due in part to excess production in March. In women's full-fashioned silk, for example, output in March was around 260,000 dozens greater than in the corresponding month of last year, while net shipments increased by approximately 83,000 dozens and

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Durene

Mesh, Fancy Stitch, or Plain —

STANDARD-COOSA-THATCHER Durene will do a better job for you, —because uniformity of quality is a fundamental of Standard-Coosa-Thatcher Durene . . .

- Evenness of Thread
- Accuracy of Count
- in well-wound packages

Samples on Request

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Executive and Sales Offices: Lafayette Building, Philadelphia, Pa.

Branch Offices:— 456 Fourth Ave. New York; Johnston Bldg. Charlotte, N. C.; 940 Merchandise Mart Chicago, Ill.

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unfilled orders at the end of the month were for 453,801 dozens, compared with 995,625 dozens at the end of March in 1931. Mill stocks decreased by less than 65,000 dozens.

This would appear to have left a bad situation in April, the actual reflex of which was seen in May, in radically diminished production, according to unofficial reports of idle machinery. The Department of Commerce figures are from reports of 351 identical establishments.

Women's seamless made a somewhat better showing in March, and production of men's seamless was so much better balanced with conditions in a declining market that this division of the hosiery industry may not have suffered severely in May. Production for identical mills dropped by over 200,000 dozens and the decline in net shipments was approximately 180,000 dozens. The unfilled orders were for around 280,000 dozens less while stocks in mills declined about 150,000 dozens. In all groups, apparently, manufacturers had over-estimated the pressure for spring hosiery, and in May felt the full force of this exaggerated gauge of the market.

Rayon in women's hosiery made a sharp gain in the March production, the increase in straight rayon being about 65,000 dozens for seamless. There were increases in women's full-fashioned rayon and in rayon for boys', misses' and children's lines. Comparing further with March last year, there was increased production of silk and rayon in combination for both full-fashioned and seamless for women and for boys', misses' and children's, while cotton and rayon combination had an almost all-around setback.

The cut in hosiery production in May was especially deep in Pennsylvania and in the New Jersey area, amounting at times to around 65 to 75 per cent according to rough estimates of some observers. In the Philadelphia Federal Reserve district, comprising Pennsylvania, Delaware and a part of New Jersey, the bank's report for April shows a gain of five per cent in employment in the hosiery industry over April a year ago, but a decline of 19 per cent in payrolls. In other knit goods the decline in payrolls was 29 per cent.

A few full-fashioned mills operated steadily, some on 21-hour schedules for two shifts, during the pronounced lull. A mill in Reading making high grade 45-gauge goods, has been, and still was in May, on a day and night schedule, being favored with a "steady outlet", as was explained by an official of the company. Another, which had been oeprating two days a week, went to full time, having received a large order, it was stated by a person authorized to speak for the management. Mills that are continually making new outlets appear to be the more nearly closed down. A Philadelphia mill selling to retailers has had a busy spring and another in the same class is not only selling capacity production but is buying in the gray from other mills for less than its own cost of manufacture. There has, of course, been an increase in idle machinery due in large part to the bottom dropping out of the market for mesh stockings.

The Weinerth Knitting and Machine Co., Reading, women's seamless, reports well sustained demand and

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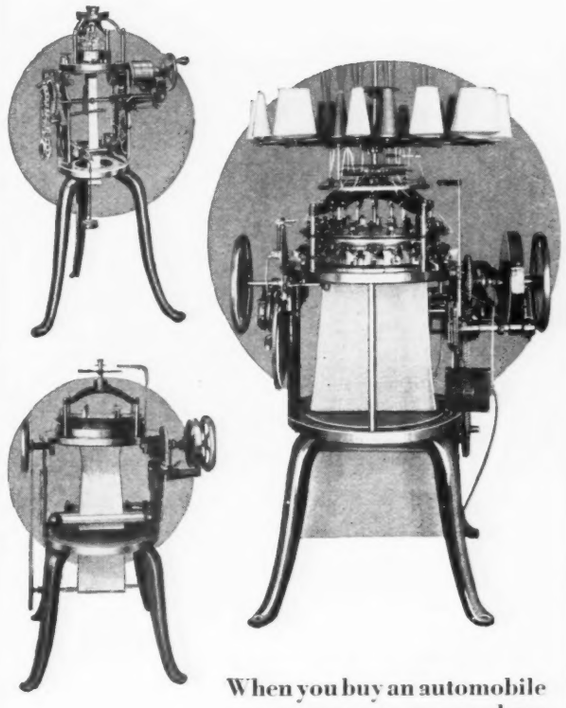

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Special Knitting Machines From ¼ inch to 36 inches.

When you buy an automobile —you are sure to purchase a car with a proud performance record. Why not apply the same excellent logic when you equip your mill with knitting machines? The name Brinton stands as high in its field, as Rolls-Royce, Packard, and Cadillac in the automotive industry.

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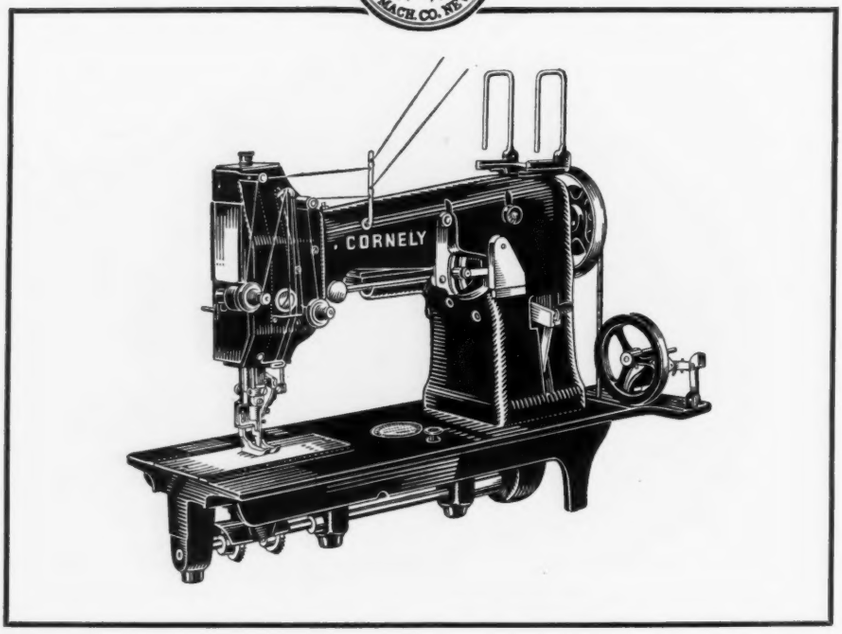

Speed and quality of production on all classes of work—underwear, dresses, blouses, table linens, sheets, pillow cases, etc. Makes holes of various sizes and may be had with or without picot edge cutting feature.

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Gentlemen:

Please send me work samples from the new high-speed, two needle Cornely Hemstitch Machine.

Name .....

Company name.....

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.....

operating to near full time. This is one of the few seamless mills so branding every pair of its irregulars that only a blind person would buy them as first grade. "We have lost some sales by refusing to omit the brand for the accommodation of a few buyers," the management says, but believes its production is in better repute by reason of the stand taken as to sub-standards.

The few seamless mills in Philadelphia have fared fairly well in matter of shipments during the spring recession, finding that their grades to retail for a half dollar, for pure thread silk, are free sellers in some communities in competition with full-fashioned silk at 50 cents. Between dollar full-fashioned silk and seamless half dollar silk, purposely cheapened 39-gauge is said to be squeezed from two angles, and it is a common forecast that the cheapest fashioned will eventually command less than average quality seamless.

Pennsylvania Underwear Mills Take Stand Against Cheapening to Provide a Price Advantage.

The gain in production of knitted underwear in 1931 over 1930 is likely to be not maintained in 1932, in the opinion of manufacturers commenting on the late start made in buying winter weights and an analysis of the reports of 130 identical mills for 1930 and 1931. These figures go further toward establishing the fact that heavies are giving way to shorts and shirts and that popularity of the latter may account for the production in 1931 amounting to over a half million dozens more than for 1930, according to a compilation of reports by the Department of Commerce.

Some factors profess to believe that the lull in underwear in May was due to carrying 1931 output to beyond distribution requirements. In any event, last month was a period of more general curtailment of production than had been witnessed for a number of years. In the upper Schuylkill Valley of Pennsylvania, once a center for the manufacture of women's cotton underwear and men's summer weights, it was estimated by some of the manufacturers in that area that production was being reduced during May to around 30 per cent of machine capacity, some mills being totally idle for a time.

A manufacturer of both cotton and rayon underwear for women stated that his shipments of cottons this spring have exceeded those of rayon. The latter, he stated, were being hard hit by low cost of Japan silk and the exploitation of rayons of inferior construction, for price. He makes the prediction that, with continued cheapening for another year or two, skimped rayon underwear out of the poorer grades of yarn "will not fetch much more than 10 per cent of invoice value." This mill makes only the better types of both cotton and rayon underwear and has lost sales because declining to produce to buyers' specifications, the garments to be put up in the mill's packing.

A similar report is heard of the attitude of the management of the Merit Underwear Co., at Shoemakersville, also in the Schuylkill Valley, toward buyers who suggest cheapening in order to give them a

AVONDALE MILLS

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OFFER THE ADVANTAGES OF LARGE FACILITIES — QUICK SERVICE

THEY CAN READILY SUPPLY ANY TWIST, PLY, OR PUT-UP IN CARDED OR DOUBLE CARDED YARNS FOR KNITTING, WEAVING OR INSULATING IN ALL NUMBERS FROM 3's TO 40's.

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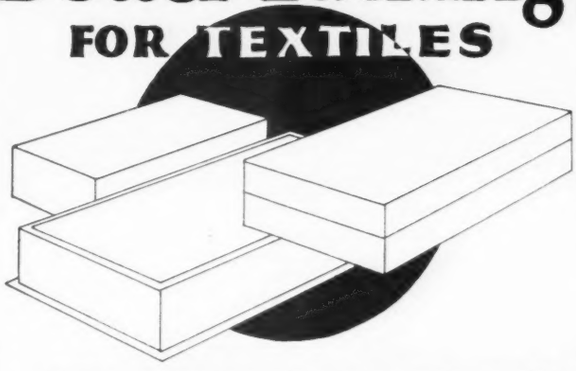

Pack your textile product in paper boxes with personality . . . styled to fit today's markets . . . printed to give your trade mark added effectiveness—in any desired combination of colors. Five strategically located Southern points to give you quick service and low freight rates. Write today to our nearest plant for samples and prices.

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Lynchburg, Va.
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price advantage. This mill had overtures from price buyers somewhat recently and disposed of them by offering to knit goods to fit a suggested price, provided they were put up in buyers' packing. This was not acceptable to the buyers, who may have placed orders elsewhere, but probably not in the Schuylkill Valley.

Knitted Outerwear Business Marking Time In a Between-Seasons Situation in Sweaters.

Stocks of worsted bathing suits at the beginning of June, when manufacturers were at the end of their production season for 1923 distribution, were considered not ample for even a dull summer requirements. This was one occasion when mills actually had held output down to firm orders, and it appears accepted orders have been on an ultra-conservative basis, while many orders were declined on the ground of unsatisfactory credit showings. Thus the markets were left with but scant supplies, assuming demand shall measure up to interest in sports and pleasure.

Retailers who are facing a shortage of at once delivery bathing suits are placing dependence upon a number of manufacturers who are booking virtually no business in sweaters. These may be said to be going through a between-seasons lull, which began earlier this year and is more pronounced than ordinarily. These concerns are in need of business, it is ascertained from mill managements, and doubtless would be glad to take on some bathing suit business during June, for enabling tardy distributors to piece out for the remainder of the season.

Knit goods for outer wear have lost out by reason of manufacturers being too eager to acquire some of the business going to competing concerns, and getting a share of it by cutting prices until profits disappeared. It is realized now that had mills held out for their established prices, there would have been no less distribution and all might have made a little money. Two of the Philadelphia manufacturers of the better types of knitted outerwear passed out of business through bankruptcy or receiverships during the price competition, and all of the machinery in both the United Globe and Edward A. Phillims Co. mills has been disposed of and moved out, being still in competition, it is understood, at far lower cost to the present owners than it stood those who succumbed during the crash in knitwear.

Bathing suits represent one division of knitted outerwear not affected as a factory product by knitting in the homes in which, especially, there are persons who may be no longer receiving a weekly wage. Machine production of sweaters has, on the other hand, been lessened by not only women out of employment who are knitting their outer garments, but by many of those also who may feel a need for "doisg their bit" in relieving destitution and put in spare hours converting worsted yarns into sweaters and skirts. This has been cutting into the business of some hitherto busy mills making ensemble knitted, two piece and three piece suits. The extent of home knitting is reflected in a considerable increase in business in hand knitting yarns, and is regarded a factor in the very conservative buying of sweaters by jobbers and retailers.

Among the Knitting Mills

REORGANIZATION of the Huntley, White & Jackson Company, High Point, N. C., manufacturers of men's fancy half-hose, has been announced. The White interests have been acquired by B. F. Huntley and Dr. W. L. Jackson, and the name of the concern has been changed to Huntley-Jackson Corporation.

Veeder-Root course counters are being installed on the full-fashioned hosiery machines of Standard Hosiery Mills, Burlington, N. C.

Whitehead Hosiery Mills, Burlington, N. C., are installing 25 additional Scott & Williams hosiery machines.

A third unit of throwing machinery is being installed in the new building of Hudson Silk Hosiery Co., Charlotte, N. C., which includes winders, 5-B doubler twisters and high-speed twisters.

About 100 new machines have been installed by the Walker County Hosiery Mills, LaFayette, Ga.

The hosiery mill being constructed at Granite Falls, N. C., by Dr. O. Corpening will be in operation this summer; it will contain 50 machines.

New machinery for the manufacture of mesh hosiery has been installed by Massachusetts Knitting Mills, Columbia, Tenn.

Jellico Hosiery Mills, Jellico, Tenn., has changed its knitting machines to produce mesh weave hosiery.

Full-Fashioned Maintenance Methods.

(Continued from page 97.)

attends to the assignments. These jobs are made out on regular tickets which are split in half, one section of the ticket going to the maintenance department, and the other section is retained in the general manager's office until the work is completed. In this way we have a direct control over all of our maintenance work.

Care of the Grounds.

Due to the fact that we have a large plot of ground which is beautifully landscaped, we have to have a gardener maintain this section during the spring, summer, and early fall. He is a member of our maintenance staff, and is controlled by the head of the maintenance department. It is his duty to keep the shrubbery and grounds in perfect shape and the results show a paradise of beautiful flowers and shrubbery throughout the summer season.

Education.

It is essential to receive the co-operation of every employee when proper maintenance of machinery and real estate is desirable. We do this through our educational department by means of lectures and talks. Just lately we have also received the co-operation of the Ajax Employees' Association who have pledged themselves to keep the plant wash and rest-rooms in first-class condition. Twice a year we have campaigns on health and cleanliness, and have outside speakers who lecture on the necessity for sanitation. Without employee co-operation it would be impossible to have proper maintenance and we stress this important feature whenever the subject comes up.

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We serve the best mills—send a request for list and same will be forthcoming.

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SILK HOSIERY FINISHES

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Can be used alone or in conjunction with one another to produce any desired feel and finish. Does not shrink or tighten up the fabrics.

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Sewing Operations

are done better, faster and more economically on Union Specials.

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DRY GOODS

Commission Merchants

43-45 WORTH STREET, NEW YORK

The Yarn Market

Philadelphia, Pa., May 17th, 1932.

A long distance telephone order for 1,500 pounds of cotton yarn was placed with a dealer here on May 16. The minimum cost of a party-to-party call to Philadelphia from the city from which the order was telephoned is $1.25. Thus the charge for the call added approximately one cent a pound to the cost of the yarn.

The incident is of interest in the fact that it may serve to show how close to their needs some manufacturers are buying yarns and indicating the extreme to which hand-to-mouth operating is being carried—an extreme that would seem to indicate business in yarns is at a stage where a change is to be expected. As it is inconceivable that the next stage could be worse than that of the present, any change must be for the better. This is the position taken by factors in the Philadelphia yarn trade.

It seems significant of the stand taken by several leading traders that in the absence of any preconcerted movement there is a strong similarity of sentiment. A typical declaration was, "We shall buy no yarn for stock, simply calling on spinners to replace what may have been sold. We shall no longer 'carry the bag' for a manufacturer. If he cannot buy yarn in advance of receiving an order for goods, there is no reason why we should not adopt the same policy. Matters have been going from bad to worse long enough."

The methods of some buyers are even more to be deplored than the matter of a decline in yarn prices, for no reason other than an apparent determination on the part of buyers to squeeze sellers and the fact that the latter permit the squeeze to be repeated day after day. A large buyer of cotton narrow fabric had a half dozen or more houses figuring on a price at which they could supply 52,000 yards. When all the bids were in, he divided the business between two houses, allotting 5000 yards to one and 2000 yards to the other, and suggested that they anticipate further orders, "for we are going to use your stuff," the buyer assured the bidders.

A few manufacturers consuming cotton yarns have asked their respective sources of supply to protect them, stating they are not quite ready to buy, but will be giving an order soon, and want to feel they are protected.

The business that is being done in cotton yarns, dealers declare, is not helping the textile trades. Help will come when passing the buck shall be no longer tolerated—when manufacturer and distributor return to the former plan of each assuming the responsibility for keeping his bins supplied.

A sale of carpet yarns, 10s/3, was made at 10 cents, for a lot of 25,000 pounds. A smaller lot was sold for 10¼ cents. It was a good grade of tinged yarn. Offers of 13 cents were received for 20s/2 warps and sales were made for 13½. Single carded 26s on cones was sold as low as 16 cents. Dealers are asking 11½ cents for good 10s single carded on cones and some accepting 11. An offer of 26 cents for 38s single combed peeler was accepted.

Transactions of the character referred to in connection with these prices are not viewed by dealers as representing "business" in cotton yarns. But they are representative of the type of business that has been passing for business since the beginning of May, a month in which less yarn was moved by Philadelphia dealers than in any month in the recollection of seasoned veterans in the trade.

While there never was a more dissatisfied yarn trade, there is not nor has there been evidence of any panicky feeling. The trade is impatient, necessarily, but there seems a 90 per cent philosophical view of conditions and a feeling of assurance that some time, some how, sellers will have an inning.

Philadelphia prices published May 16th follow:

Single Skeins.

4s to 8s	11	10s	11½
12s	12	14s	12½
16s	13	20s	14
24s	16	26s	16½
30s	17½		

Two-Ply Warps.

10s	12½	12s	13
14s	13½	16s	14
20s	14	24s	16
26s	17	30s	18
40s	24½		

Frame Spun Carded Cones.

8s	11	10s	11½
12s	12	14s	12½
16s	13	18s	13½
20s	14	22s	15
24s	16	26s	16½
30s	17½	40s	24½
30s double carded			19
30s tying-in			17

Carpet Yarns.

8s and 9s white warp twist	11½
8s tinged tubes	11
8s part waste	10

Two-Ply Combed Peeler Skeins and Warps.

8s to 16s	20	20s	22
24s	24	30s	26
40s	30	50s	34
60s	37	70s	46
80s	54		

Single Combed Peeler Yarns on Cones.

18s	19½	24s	22
30s	24½	36s	26½
38s	28	40s	29
50s	33	60s	36
70s	48	80s	54

Carded Yarn on Cones.

10s	17	12s	17½
14s	18	16s	18½
18s	19	20s	19½
24s	21	28s	22
30s	23	40s	30

Combed Peeler Yarn on Cones.

10s	21	12s	22
14s	23	16s	24
18s	24½	20s	26½
22s	27	26s	28
28s	29	30s	30
36s	32½	38s	34½
40s	35½		

Tinged Insulating Yarns.

8s–1	10½	8s–2	10½
10s–1	11	10s–2	11
12s–1	11½	12s–2	11½
		20s–2	13½

QUITEX
SPUN RAYON

Justly so, many textile manufacturers look upon the Quissett Mill as a part of their own organization.

They find that deliveries of the new Quitex Spun Rayon synchronize with their production schedules regardless of volume. Here at Quissett Mill, men and machines work for you just as though they were in reality a part of your own plant.

Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
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Let us send you samples of the new Quitex Spun Rayon.

QUISSETT MEANS QUALITY

TEXTOLITE DETERGENT

TURNING THE WHEELS OF PROGRESS

NEUTRALITE DETERGENT

TEXTOLITE DETERGENT
in finishing Knitted Fabrics

Whether the fabric is Cotton, Silk, Rayon or Wool singly or in combination TEXTOLITE is the Finishing medium *par excellence.*

BECAUSE,

It keeps water uniformly soft from day to day; absolutely controls a *constant* pH value; reduces surface tension and assists materially in wetting out and penetration of dyes.

It gives a safer, quicker and more thorough boil off and rinses completely out of the fabric carrying all impurities with it.

It retards absorption of dyestuffs by the Animal fibres and increases the affinity of dyestuffs for the Vegetable fibres hence, is an invaluable aid in matching different fibres to pattern and for correcting and leveling shades.

It prevents harshness in finished goods, makes boarding easier and cuts the percentage of redyes to the minimum.

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"THE PROOF OF THE PUDDING IS *ALWAYS* IN THE EATING."

TRISODIUM PHOSPHATE

SPECIAL PURPOSE OILS
THAT ASSURE BETTER WORK

Hydroxy One Bath Boil Off Oil

for Pure Silk. Holds gum in suspension and takes but an hour to completely degum and get your shade.

Hydroxy Art Silk Coning Oil

A specially prepared oil for coning, winding, knitting and softening dyed or undyed artificial silk. Makes the silk knit easier. Eliminates break downs and reduces seconds.

Hydroxy Art Silk Boil Off Oil

for dyeing Art Silk, Hosiery or Fabrics. Holds the oil in suspension and levels the shades.

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Manufacturing Chemists
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It is the center of uptown business life—the shopping district—and the theatrical and night life metropolis of the world. *The* SHELTON, with its many other attractions besides convenience to these activities, has become one of the most popular of hotels among visitors to the city. In addition to supplying every possible hotel service, it gives its guests an atmosphere of quiet and comfort and hospitality that is most unusual to find in a metropolitan hotel. You'll enjoy a visit to *The* SHELTON.

Room for one, $2.50 to $3.50

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Suites, $5.50 and up

The SHELTON *Swimming Pool may be used by all guests, at all times, without charge.*

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49th and Lexington Ave. New York

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Improved Equipment and Processing in the Manufacture of

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1—GREATER UNIFORMITY of moisture content and fluidity of paste. While Eagle Starch always has been approved for its uniform quality, the new Eagle Starch is controlled within still narrower limits. Every package is absolutely uniform in moisture and fluidity.

2—REDUCED SEDIMENT or residue. Especially designed equipment has resulted in the elimination of practically all sediment—which means smoother, cleaner size. Try a "creaming" test.

3—ABSENCE OF SOLUBLE SUBSTANCES which have no starch value. By additional washings, soluble impurities have been removed from the new Eagle Starch.

4—CLEANSING OF THE AIR used for drying starch is an innovation. In manufacturing the new Eagle Starch, the finest particles of dust and dirt that are in the air are removed prior to using this air for drying Eagle.

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For best results, always be sure that starch is thoroughly "creamed" by stirring with cold water before admitting steam. For further information, please write

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600 ROOMS AND BATHS

A Room and a Bath For Two and a Half

$2.50 *Single with Bath*

$4.00 *Double with Bath*

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ADJUSTABLE COTTON CLEANING SYSTEM

What it does—

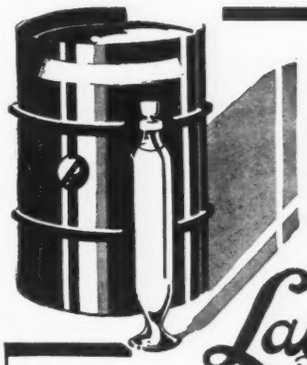
1 —Opens cotton and removes motes, heavy dirt, leaf particles, etc., employing mechanical and centrifugal force.

2 —Frees opened cotton from buckles, iron, seed, sticks and other materials heavier than cotton, employing centrifugal force, gravity and air.

3 —Draws out dust and powdered leaf, employing an air suction downward through the cleaning screen.

Write for detailed information.

THE CENTRIF-AIR MACHINE CO., INC.
ATLANTA, GA.



YOU CAN SAVE as much as 1/3 of your Kier boiling time with

Laurel Brand Soluble Pine Oils

SPECIAL formulae have been developed and proved in use to take care of cotton, Durene, and mixtures of these with other fibres.

Write for information, describing the product to be handled.

Laurel Soluble Pine Oils, Pine-Castor Oils, for Silk, Rayon, Wool, Cotton, Celanese, Tubize, etc.

Laurel Soap Mfg. Company
INCORPORATED
WM. H. BERTOLET & SONS
2600 EAST TIOGA STREET :: :: PHILADELPHIA

Textile Treatment Specialists since 1909

SOLVAY

TRADE MARK REG U S PAT. OFF.

PRODUCTS

Technical Service

We maintain in our Technical Service Department a staff of experts in Alkali. These men have studied the problems of the various industries using Alkali and know their particular and individual needs. If you have a problem affected by soda ash, caustic soda, or any other alkali, that is causing you anxiety, we will be pleased to have you correspond with THE SOLVAY PROCESS COMPANY, Syracuse, N. Y., attention Technical Service Department. If necessary, they will be glad to send a man who has specialized on your particular problem to assist you in working out a satisfactory solution.

SOLVAY SALES CORPORATION
Alkalies and Chemical Products Manufactured by The Solvay Process Company
61 BROADWAY, NEW YORK

SOUTHERN DISTRIBUTORS:
Charles H. Stone, Charlotte, N. C.
Woodward Wight & Co., New Orleans, La.
J. T. Sudduth & Co., Birmingham, Ala.
Miller-Lenfestey Supply Company, Tampa, Miami and Jacksonville, Fla.
Burkart, Schier Chemical Co., Chattanooga, Tenn.

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Card Room Bobbins

COMPRESSED HARD PAPER

Slubbers—Intermediates—Speeders, with Inside Metal Protection. For Long Satisfactory Service. True Running, do not Warp or Splinter. Do not absorb oil. Favored by Executives as well as Operatives.

Samples and Prices From

ADOLFF BOBBIN COMPANY

Sole Representative: G. BAUSCH
576 Davis Ave., Kearny, N. J.
Telephone: Kearny 2-1044

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SPOOLS
TWISTERS
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SILK SPOOLS
COPS & QUILLS
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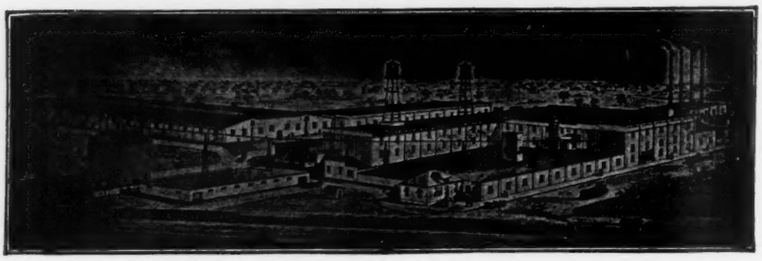


VICTOR MILL STARCH

The Weaver's Friend

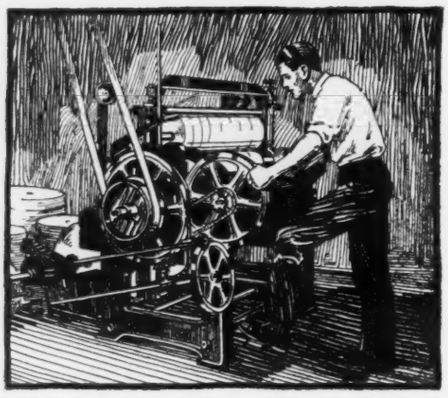
It boils thin—it penetrates the warp—increases breaking strength and carries the weight into the cloth. Being thoroughly washed free of gluten and other foreign matter it gives a bleach and finish to the goods that you can get from no other starch.

A trial order will convince you that VICTOR STARCH has no equal on the market.

THE KEEVER STARCH COMPANY, Columbus, Ohio

Southern Agent: MR. DANIEL H. WALLACE, Greenville, S. C.

If you are not already using VICTOR STARCH call on our representative for a demonstration at your convenience.



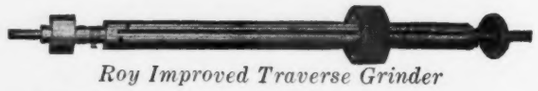
TAPE SLITTER

CAMACHINE 6 is designed to cut rolls of cotton or woolen fabrics into strip, bindings, tapes also rolls of wider widths if necessary. The rolls produced are clean cut, uniformly wound and accurate as to width.

Write for interesting illustrated literature.

CAMERON MACHINE COMPANY
61 POPLAR ST. BROOKLYN, NEW YORK

Your Cotton Production



Roy Improved Traverse Grinder

Roy Improved Roller Grinder

Much depends upon the start you give it. Roy Cotton Card Grinders will keep your cards in good condition continuouslv. Furnished singly or in sets of two Improved Traverse and one Improved Roller Grinder.

The investment is small; the return well worth-while.

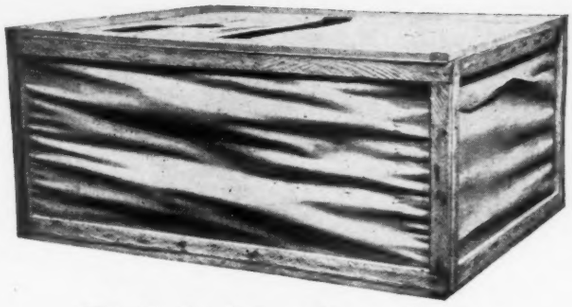
B.S.Roy & Son Co.

Established 1868

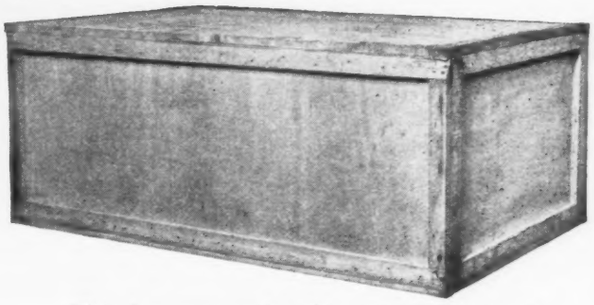
Worcester, Mass.

DOES **MOISTURE** AFFECT YOUR **PLYWOOD BOXES** LIKE

THIS OR THIS?



This box has been under a water spray
48 MINUTES
It is glued with **VEGETABLE**
(non-water-resisting) glue



This box was under the *same* water spray
48 HOURS!!!
It is glued with **LAUXEIN**
(water-resisting) glue

A postcard will bring you the name of a plywood box manufacturer near you, who uses **LAUXEIN** glue exclusively. We believe you will find his prices no higher than those of other plywood box manufacturers.

SPECIFY LAUXEIN GLUE ON YOUR NEXT PLYWOOD BOX ORDER

I. F. LAUCKS, INC. BLOOMINGTON, ILLINOIS.

"Water resistant boxes deliver the goods."

BOSSON & LANE

Manufacturing Chemists
Established Jan. 1, 1895
Works and Office, Atlantic, Mass.

High Grade Castor Oil Products

Sulphonated-Saponified

Soluble Oil — Para Soap Oil
Turkey Red Oil — Castor Soap Oil
Soluble Pine Oil — B & L Bleaching Oil

PENTRALYN, a superior assistant for Beam, Spool, Bobbin and Package Dyeing.

Bleach Softener CSO, Finishing Sizings and Softeners.

VICTROLYN, the economical assistant in warp sizing. Penetrating, Lubricating and wholly efficient.

B & L Bleachers' Bluings and Violet Tints

GOOD MONEY VALUES-FREEDOM FROM WORRY

Prestige
. . . *without charge!*

Stop at the Atlanta Biltmore, and get that added "difference" between just-another-lodging-place and a hotel of distinction. A glance at our rates proves there's no added charge for this quality.

Conveniently located, halfway between the Terminal and Peachtree Stations. Golfing privileges, to some of the finest courses, extended to our guests. If you're interested in radio: Station WSB is located at the Biltmore, and a special elevator will take you up to the studio.

All rooms are outside, airy, beautifully furnished, each with private bath and circulating ice water. Rates are surprisingly low . . . $3, $4, and $5, for single rooms; and $5, $6, $7, and $8 for double rooms. Popular priced meals served in all dining rooms.

ATLANTA BILTMORE
"The South's Supreme Hotel"

SAVE TIME!
STOP AT THE BISMARCK

The Bismarck is close to the wholesale district . . . on La Salle Street . . . in the theatre district . . . three blocks to Merchandise Mart.

Quiet, outside rooms . . . super-comfort beds . . . soft water for bath . . . mail signal in each room . . . renowned cuisine . . . service of hospitality.

Rooms with bath $3.50, $4, $4.50, $5., and $6. Rooms without bath $2.50.

OTTO K. EITEL, Manager

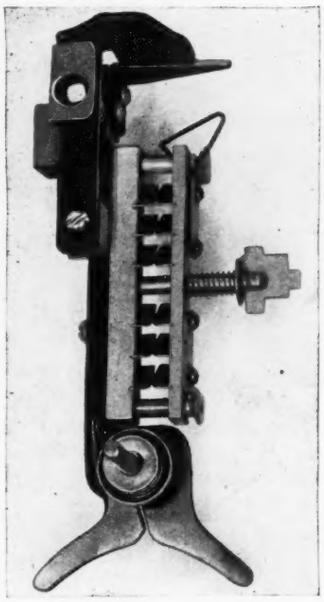
Write for booklet with downtown Map

new
BISMARCK HOTEL
CHICAGO
RANDOLPH AT LA SALLE

No More Secrets

The Audit Bureau of Circulations was formed by large advertisers and publishers to put a ban on circulation secrets. Publications willing to have their records checked by impartial auditors belong to the Bureau, and the number of papers they sell is published to the world. No one doubts the "A. B. C." report. It eliminates unknown quantities.

COTTON
ATLANTA, GEORGIA



The New and Improved Eclipse Yarn Cleaner

You are looking at a picture of the "New and Improved Eclipse Yarn Cleaner." This small and sturdy device can be attached to most "Makes" of yarn winding machines. Its purpose is to remove "Trash" from cotton yarn which the carding process failed to remove. It cleans yarn cleaner than double carding and removes imperfections caused by bad spinning.

The Eclipse Yarn Cleaner is fast becoming standard equipment in many spinning plants. It automatically *insures* any spinning plant a "Finer and Better" product by making "Dirty and Trashy" yarn clean and "Clean" yarn *cleaner*.

Every spinner of SALE yarn should be equipped with "The Eclipse Yarn Cleaner."

On request our representative will call and give you complete information.

ECLIPSE TEXTILE DEVICES, INC.
Elmira, N. Y.

ECLIPSE
IMPROVED
Yarn Cleaner

The Extra-wear Spinning Ring

DIAMOND FINISH

DIAMOND FINISH Rings laugh at the thermometer!

Start new DIAMOND FINISH Rings on the hottest, most humid "dog days." One Southern superintendent started in June and installed several thousand as he found that "they ran without any trouble even tho some were started up on the worst of dog days." If you need them, install new DIAMOND FINISH Rings now. You'll reduce your traveler bills, make yarn much freer from roughness and fuzziness, and make better quality goods on better running looms.

Free samples upon request

Whitinsville (Mass.) SPINNING RING CO.

Devoted to making "DIAMOND FINISH" Spinning and Twister Rings since

1873

HERMAS

SHEARS THAT ARE FULLY AUTOMATIC ALLOWING ONE OPERATOR TO RUN A BATTERY

BALL BEARING THROUGHOUT WITH ZERK SYSTEM OF LUBRICATION

PATENTED SUCTION DRAWS ALL LOOSE ENDS FROM SELVAGES INTO KNIVES WITHOUT AID OF BRUSHES

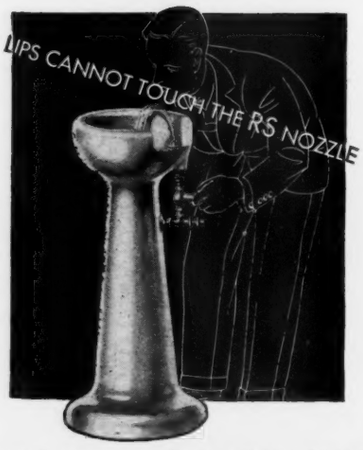
BRUSHES PROVIDED WHEN REQUIRED TO CLEAN OFF LEAF AND MOTES

LARGE PRODUCTION LOW UPKEEP
SMALL FLOOR SPACE LOW FIRST COST

ROLLING MEASURING, EXAMINING BRUSHERS, SHEARS AND OTHER CLOTH ROOM MACHINERY

Hermas Machine Company
Warburton Ave., Susquehanna R. R.
Hawthorne, N. J.

Southern Representatives:
Carolina Specialty Co.,
Charlotte, N. C.



HEALTH COMES FIRST

That is the decision of every institution installing Rundle-Spence drinking fountains . . . and they arrive at their decision rightfully.
First, because the sanitary features of an R-S fountain place it in a class by itself; and secondly, because without exception the R-S fountain prevents all users from touching their lips to the jet or nozzle.
Before you decide on the type of drinking fountain to install, write for the R-S catalog. Colors are available for any color scheme.

RUNDLE-SPENCE MFG. CO.
451 N. Fourth St. Milwaukee, Wisconsin

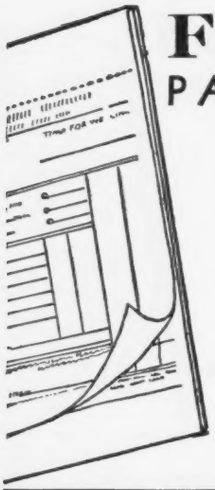
RUNDLE-SPENCE

Recommended *for* YOUR PAYROLL DEPARTMENT

If you employ 25 or more workers!

The Patented

Four-in-One
PAY ENVELOPE



It (1) carries the pay, (2) supplies employee's wage receipt, (3) is both a time and wage statement, (4) provides a thorough-going deduction statement.

May we send samples for you to discuss with your payroll department?

ATLANTA ENVELOPE CO.
505-7-9-11 Stewart Ave., S. W.
ATLANTA, GA.

4 in 1 - - 4 in 1 - - 4 in 1 - - 4 in 1

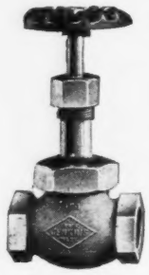


Fig. 106-A

Fig. 106-A, Jenkins Standard Bronze Globe Valve with the one-piece screw-over bonnet and slip-on stay-on disc holder is recommended for 150 lbs. steam or 250 lbs. oil, water or gas working pressure. JENKINS BROS., 80 White St., New York, N. Y.; 510 Main St., Bridgeport, Conn.; 524 Atlantic Ave., Boston, Mass.; 133 No. Seventh St., Philadelphia, Pa.; 646 Washington Blvd., Chicago, Ill. JENKINS BROS., Ltd., Montreal, Can.; London, England.

Jenkins
BRONZE IRON STEEL
VALVES
Since 1864

Pays Twice Its Cost

A Loper contract contains the guarantee that its service will pay you at least twice the amount it costs you.

Let us give you references that prove we accomplish even more than we guarantee.

Fully 25% of All Cotton Textile Spindles in the U. S. are Operated on the Loper System.

Ralph E. Loper Co.
INDUSTRIAL ENGINEERS
Specialists in Textile Costs Over 19 Years
FALL RIVER, MASS. GREENVILLE, S. C.

"NO LUCK"

for Thieving Fingers

Cyclone Sectional Partitions

More difficult of access than floors or ceilings. Equipped with pick-proof tumbler lock. All sections are standard and punched alike for bolts. Easily interchangeable. Economically installed.

Cyclone Window Guards

Cyclone Window Guards protect the glass and prevent entrance. Furnished in practically any size wire, any size mesh, for any size opening. Send list of window sizes for accurate estimate.

If your property is worth owning, it is worth protecting. And when you consider protection, do not forget the satisfactory results that institutions everywhere are having with Cyclone Open Mesh Work.

This dense net of steel stops the most experienced thief—and, needless to say, prevents completely the casual pilfering that always takes place in any building. Keeps strangers from lockers, store-rooms—yet freely admits air and light. Presents no fire hazard.

Sectional Partitions and Window Guards are adaptable—and at a pleasing low price. Have almost 100% salvage value.

For your own protection, be sure to get our estimate before you contract for open mesh work. Write.

CYCLONE FENCE COMPANY
General Offices: Waukegan, Ill.
Branch Offices in All Principal Cities

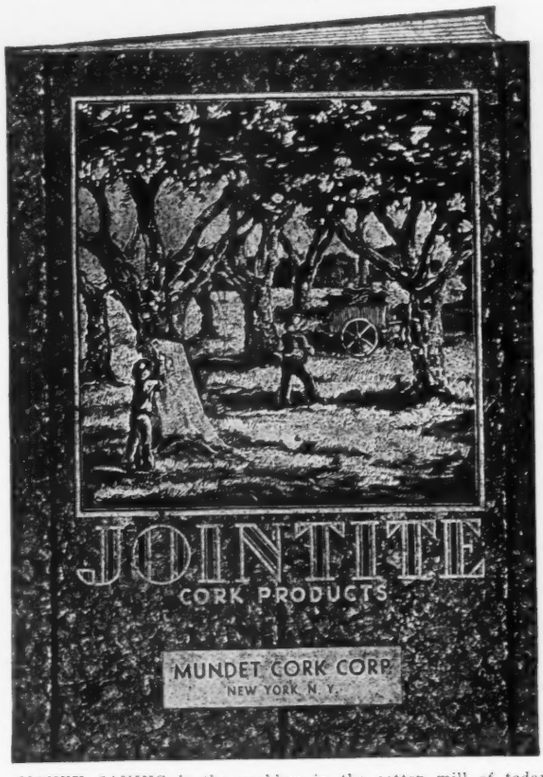
SUBSIDIARY OF UNITED STATES STEEL CORPORATION

Pacific Coast Division: Standard Fence Company, Oakland, Calif.

Cyclone Fence
REG. U.S. PAT. OFF.

What is your **INSULATION** Problem?

What is your **ISOLATION** Problem?



MONEY SAVING is the problem in the cotton mill of today. How much is your insulation costing you? What kind of material are you using? How thick is it? Who installed it? Perhaps it would pay you, and pay you **well**, to have it done all over again, this time using Mundet "Jointite" Cork Board.

We will be pleased to have you put problems of this sort up to our engineers. ECONOMY is their specialty. Their advice and their efforts in your behalf will not obligate you at all. Don't hesitate regardless of the size of the job and regardless of your location. We cover the entire United States and Canada with Practical Insulation and Isolation Engineers, and branches in the principal cities.

MUNDET CORK CORP.

Affiliated with L. Mundet & Son....Established 1865

450 Seventh Avenue **New York City**

☐ We have not yet received a copy of your new catalog (shown above). Please send us one without obligating us in the slightest.

We shall be glad to know the approximate cost of the following prospective work:

☐ Roof Insulation for roof as follows:

.....

.....

☐ Mundet "Jointite" Cork Board for insulating rooms as follows:

.....

.....

.....

☐ Cork Pipe Covering for:

.....

.....

☐ Elimination of machinery noise and vibration. Problem as follows:

.....

.....

☐ Cork Tile for floor as follows:

.....

.....

☐ Bulletin Board for following purposes:

.....

.....

☐ Please send representative.
☐ Do not send representative.

Name .....
Firm .....
Street .....
City .....
State .....

DIAGNOSIS

Textile mill executives and bankers desiring a complete service on—

APPRAISALS
RELOCATION OF PLANTS
LIQUIDATIONS
PROPERTY DISPOSALS
NEW MILL SITES

—should remember that the H. M. McCord organization makes a complete diagnosis of the problem concerned, and employs a procedure in accordance with the usual McCord precision.

Your inquiries are invited.

H. M. McCORD

1400 Woodside Bldg., Greenville, S. C.

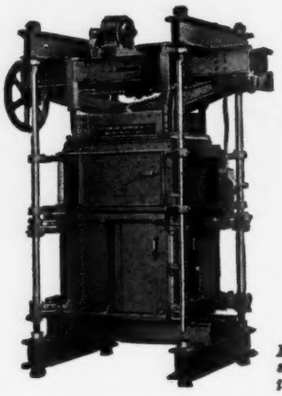
Boston, Mass.
161 Devonshire Street,
Liberty: 5948

New York City
100 E. 42nd Street,
Ashland 4-0345

LOGEMANN

Hand - Belt - Electric - Hydraulic

Baling — Presses



For Waste—
Hand operated Balers—
Deep-box power Balers—
Hydraulic Balers—

For Finished Goods—
Hand operated Balers—
Power toggle - lever Balers—
Hydraulic high-density Balers—

For Yarns—
High - density power Balers—

Model 26-MS. Power Baler specially designed for export yarn baling.

There is a LOGEMANN baler for every purpose.

Write for details specifying your needs.

LOGEMANN BROTHERS CO.

3102 Burleigh St., Milwaukee, Wis.

TRADING POST EXCHANGE

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

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	Per Inch		Per Inch
1 inch	5.00	15 inches	4.20
3 inches	4.80	20 inches	4.00
6 inches	4.60	50 inches	3.80
10 inches	4.40	100 inches	3.60

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Advertisements set "Want ad" style. Positions wanted .05 word per insertion. Minimum charge $1.00 per insertion. Cash with order. All other classifications .10 word per insertion. Minimum charge $2.00 per insertion. Advertisements of equipment, for sale, rent or wanted and professional cards are accepted at display rate only.

Box number addresses care of COTTON, Grant Bldg., Atlanta, Ga., count as eight words.

TANK ON TOWER FOR SALE

50000 Gallon Tank on 75 ft. Tower, Excellent Condition. Will Sell At Low Price As Stands In South. Oil Engines, Tanks, Rail, Equipment, Etc.

ZELNICKER, INC., ST. LOUIS, MO.

FOR SALE:

2000 galvanized Witt cans for surface toilets, 6 3/5 gallons capacity, 13" diameter, 12¾" high (inside measurements) weight 8½ pounds, side handles, no lids, good condition. Will sell all or part.

PROXIMITY MANUFACTURING CO., Greensboro, N. C.

POSITION WANTED

Overseer of carding by young man, 14 years experience in preparation department for yarns from 6's to 120's, combed and carded, English, married, capable and willing. Excellent references. Apply Box 90, care "COTTON," Grant Bldg., Atlanta, Ga.

Representative Wanted

Middle-aged man wanted for exclusive local territory to represent company with local business. Man experienced in industrial maintenance work or who has sold to industrial plants preferred. Substantial earnings, permanent connection. Write Union Products Co., Station A, Cleveland, Ohio.

YOUR ADVERTISEMENT IN THIS SECTION—

Have you some equipment, new or second-hand, which you wish to dispose of; do you desire a good man to fill a vacancy in your mill; do you desire a position; do you desire your business or professional card placed before the textile industry?—

Advertising in this section produces results at small cost. Note the rates at the top of this page and tell us what you wish to advertise.

COTTON, GRANT BLDG., ATLANTA, GA.

PRECISION!

The above Hopper Stand Assembly for Draper Loom on which jigs were used in the manufacture of all parts is an example of the faithfulness to detail and excellence of manufacture of all Henderson products and repair parts.

———::———

Spiral, bevel and spur gears, loom parts, beam heads, etc. Castings—Gears—Picker Repair Parts.

Henderson Foundry & Machine Works

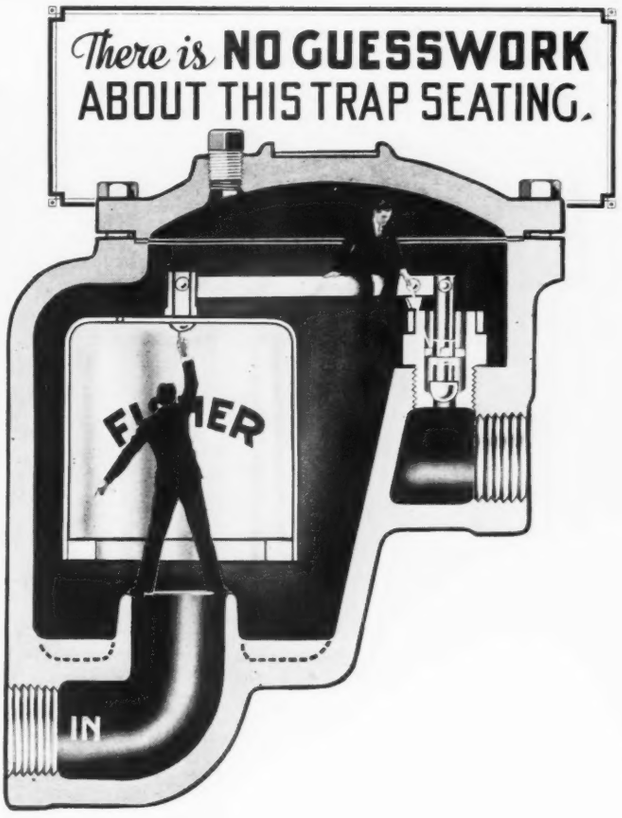
Hampton, Ga.

COMPRESSION develops the tremendous strength of the FLEXCO HD joint. The recessed plates and teeth embed in the belt, producing a smooth, powerful, tight butt joint of straight-line pull. Plies cannot work against each other and separate in belt ends. Remarkable service records are developed by these fasteners and thousands of plants use nothing else. Made of steel or Monel Metal. Templates, wrenches and punches supplied to facilitate application. Sold by jobbers and belting houses in five sizes. Recommendations supplied gladly by our engineering department. Inquiries invited.

FLEXIBLE STEEL LACING COMPANY

4619 Lexington Street, Chicago, U. S. A.

In England at 135 Finsbury Pavement, London, E. C. 2



A SUPERIOR TRAP AT AN ECONOMICAL PRICE

Positive guided large capacity inner valve. Rigid, powerful leverage; no sliding hinges or guess-work, valve seats tight. Free floating, non-air binding, inverted bucket. Horizontal pipe connections permitting inspection without breaking pipe line.

New Fisher Bulletin ST 10 tells interesting details and capacities of this most modern trap

Fisher Governor Company

201 SOUTH FIRST AVENUE MARSHALLTOWN, IOWA

FISHER TRADE MARK

1013 SANTA FE AVENUE LOS ANGELES, CALIF.

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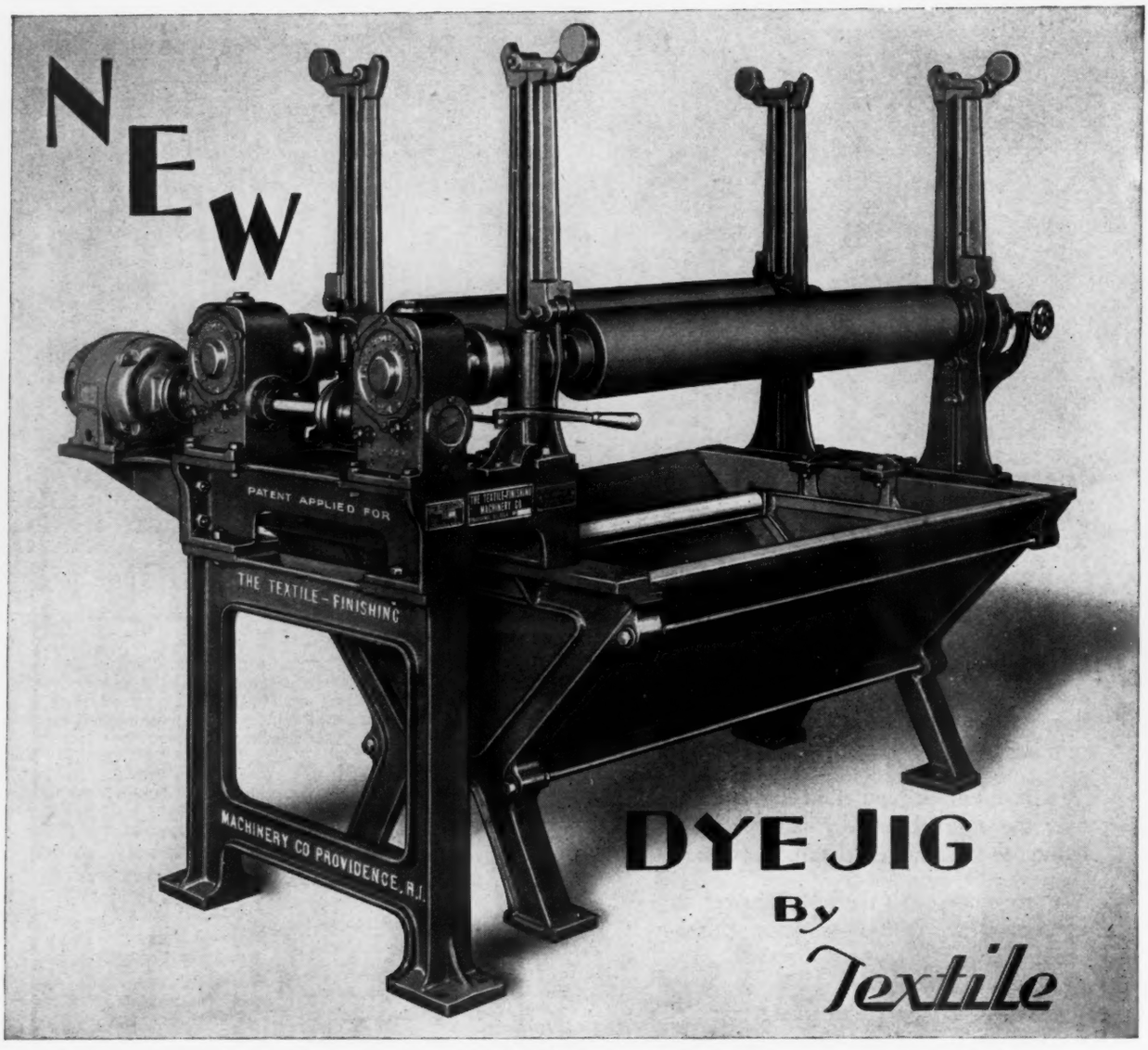

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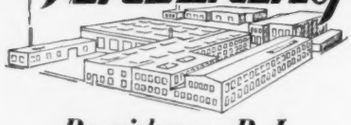

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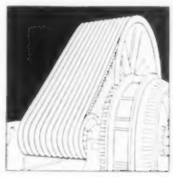

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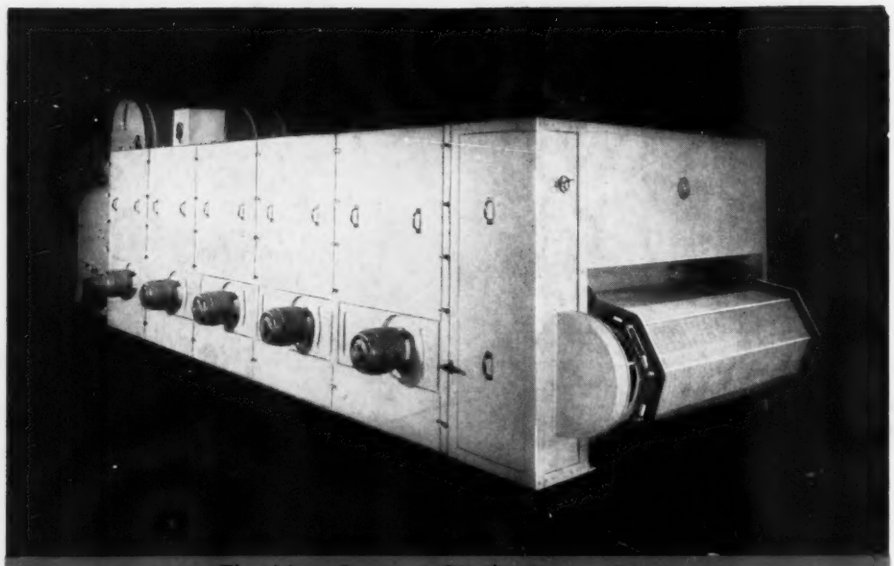

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